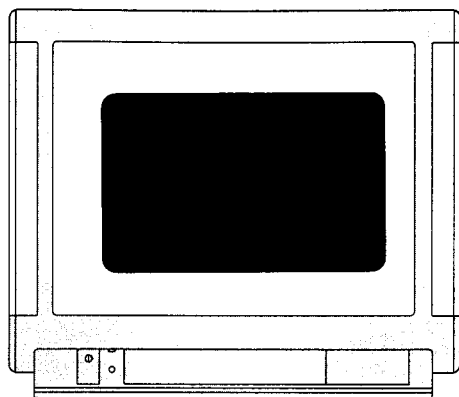


Service Manual



Colour TV

Models

CT-25AV1BD	CT-28AV1BD
CT-25AV1BDS	CT-28AV1BDS
CT-25AV1LD	CT-28AV1LD

SPECIFICATIONS

Reception System	CCIR-I PAL		
Reception Frequency	UHF 470MHz~862MHz	(all models)	
	VHF 47~170MHz (VB1), 170~448MHz (VB2)		(LD models only)
Mains Input.....	AC 230V 50Hz		
Power Consumption	110W	(25AV1BD/LD)	
	128W	(25AV1BDS)	
	112W	(28AV1BD/LD)	
	130W	(28AV1BDS)	
Aerial Input	75 ohm		
Intermediate Frequency	Video:	39.5MHz	
	Sound:	33.5MHz	
Audio Output	2 x 12W (L/R) + 12W (Centre) + 2 x 6W (Rear)		(25AV1 models)
(music power)	2 x 12W (L/R) + 15W (Woofer) + 12W (Centre) + 2 x 6W (Rear)		(28AV1 models)
Speakers	2 x (10cm + 4cm) (L/R) + 12x8cm (Centre) + 2 x 10cm (Rear)		(25AV1 models)
	2 x (10cm + 4cm) (L/R) + 10cm (Woofer) + 12x8cm (Centre)		
	+ 2 x 10cm (Rear)		(28AV1 models)
Chassis	EE3		
Picture Tube	A59EAK71X11	59cm(V)/25", 110°	(25AV1 models)
	A66EGW83X101	66cm(V)/28", 110°	(28AV1 models)
Cabinet dimensions.....	604mm x 473mm x 500mm		(25AV1 models)
(approx. W x D x H)	671mm x 495mm x 548mm		(28AV1 models)
Weight	28Kg	(25AV1 models)	
(approx. Not incl. stand	34Kg	(28AV1 models)	
or rear speakers)			

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1 GENERAL NOTES

1.1 SAFETY PRECAUTIONS

1.1.1 General Warnings

1. Observe any cautions and safety related notes located inside the receiver cabinet and on the receiver chassis.
2. An isolation transformer should be used between the television receiver and the AC power supply point before any test or servicing is performed on a LIVE chassis television receiver.
3. Operation of these receivers outside the cabinet or with the back cover removed involves a shock hazard from the receiver power supplies. Work on the receiver should not be attempted by anyone who is not familiar with the precautions necessary when working on high voltage equipment.
4. Do not install, remove or handle the picture tube in way unless shatterproof goggles are worn. People not so equipped should be kept away while the picture tube is being handled. Keep the picture tube away from the body while handling.
5. When service is required, observe the original lead dressing. Extra precaution should be given to assure correct lead dressing in the high voltage area. Where a short-circuit has occurred, replace those components that indicate evidence of overheating.

1.1.2 X-RAY Warning

Under fault conditions the CRT can generate X-rays. The use of a lead apron is recommended if available.

When replacing the CRT only use the designated replacement part as it is a critical component with regard to X-rays. No high-voltage adjustments are provided.

1.1.3 Leakage Current Check

Before returning the receiver to the customer it is recommended that the leakage current be measured according to the following method:

With the AC plug removed from the AC source, place a jumper across the live and neutral pins. Turn the receiver AC switch on. Using an OHMMETER, connect one lead to the shorted AC plug and touch the other lead to each exposed metal part (antennas, screw heads, etc.) in turn, particularly any exposed metal part having a return path to the chassis. Any resistance below a value of 1 MEG OHM indicates an abnormality which requires corrective action.

1.2 CONTROLS AND CONNECTORS

1.2.1 Front Panel

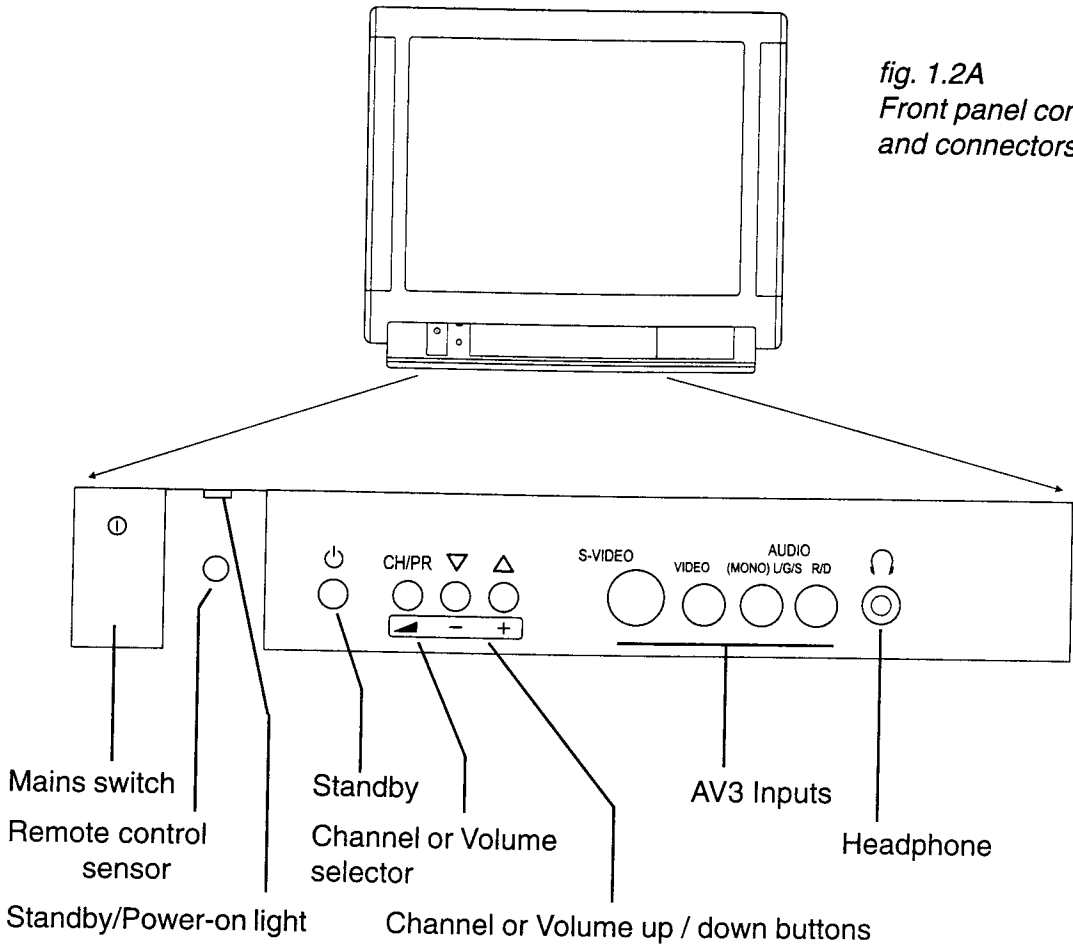


fig. 1.2A
Front panel controls
and connectors

1.2.2 Rear Panel Connectors

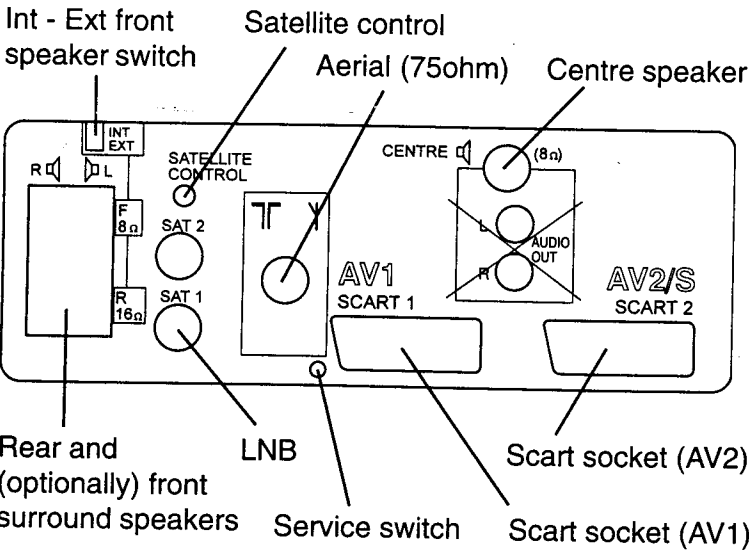


fig. 1.2B Rear panel connectors

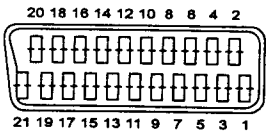


fig. 1.2C Scart socket pin details

Pin	AV1	AV2
1	Audio out - R	Audio out - R
2	Audio in - R	Audio in - R
3	Audio out - L	Audio out - L
4	Audio earth	Audio earth
5	Blue earth	Earth
6	Audio in - L	Audio in - L
7	Blue in	Not connected
8	Function switch	Function switch
9	Green earth	Earth
10	Not connected	Not connected
11	Green in	Not connected
12	Not connected	Not connected
13	Red earth	Chroma earth
14	Blanking earth	Earth
15	Red in	Chroma in
16	RGB blanking	Not connected
17	Video out earth	Video out earth
18	Video in earth	Y earth
19	Video out	Video out
20	Video in	Y in
21	Socket earth	Socket earth

1.3 REQUIRED EQUIPMENT

1.3.1 Measuring equipment

- Oscilloscope
- Signal generator
- DC milliammeter
- DC voltmeter

1.3.2 Test signals

- PAL Crosshatch
- PAL Monoscope (or a VCR playing a monoscope alignment tape)
- PAL Colour-bar with the specification as in figure 1.3A below:

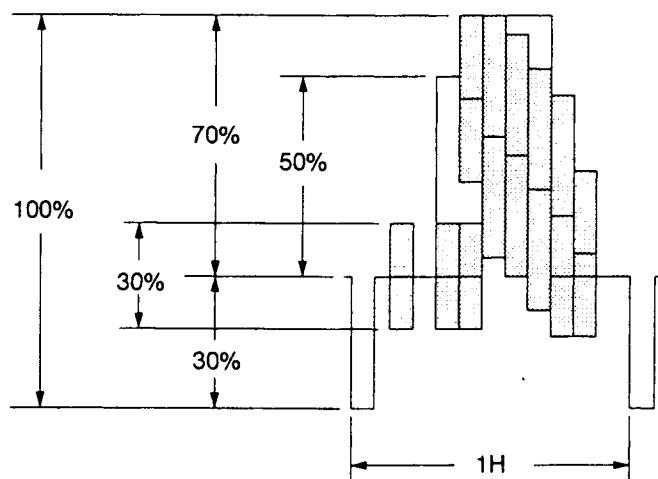


fig. 1.3A Split-field colour bars (with 100% window)

1.4 CONNECTING LEADS

1.4.1 Identification

Connecting leads are identified by the colours of their wires according to figure 1.4A below:

Colour	Code
BLACK	A
BROWN	B
RED	C
ORANGE	D
YELLOW	E
GREEN	not used (earth)
BLUE	G
VIOLET	H
GREY	J
WHITE	K
PINK	L

Example:

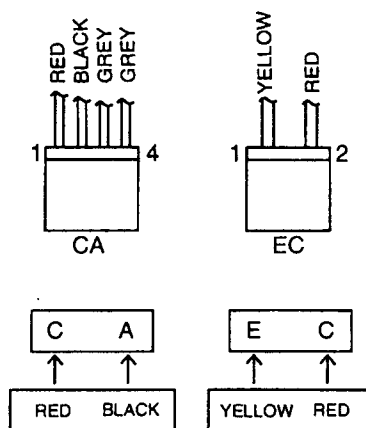


fig. 1.4A Connecting lead identification chart

1.4.2 Lead dressing

Leads must be dressed as shown in table 1.4B and the diagram (fig. 1.4C) below. The leads are routed or clamped so that they do not come close to any heat generating or high-tension parts.

The anode lead wire is routed such that no tension is applied to the anode cap. If the mounting angle of the anode cap and the route of the anode lead wires are changed, return them to the initial angle and route.

CLAMP	25/28 AV1 BD/LD	25/28 AV1 BDS
1	KB, KK	KB, KK
2	DA, DE, HJ	DA, DE, HJ
3	HH, HJ	HH, HJ
4	DD, DE, DS	DD, DE, DS
5	DD	CA, DD, DG, GB
6	GA, GB, KD, DA (loop wires 1 + 2)	GA, GB, KD, DA (loop wires 1 + 2)
7	DY	DY
8	LB, SA (25AV1 only), BA (looped)	LB, SA (25AV1 only), BA (looped)
9	GA, GB, KD	GA, GB, KD
10	LB (looped), SB, Focus	LB (looped), SB, Focus
11	Anode lead	Anode lead
12	BA, DA (wires 1 + 2 only)	BA, DA (wires 1 + 2 only)

table 1.4B Lead-dressing table.

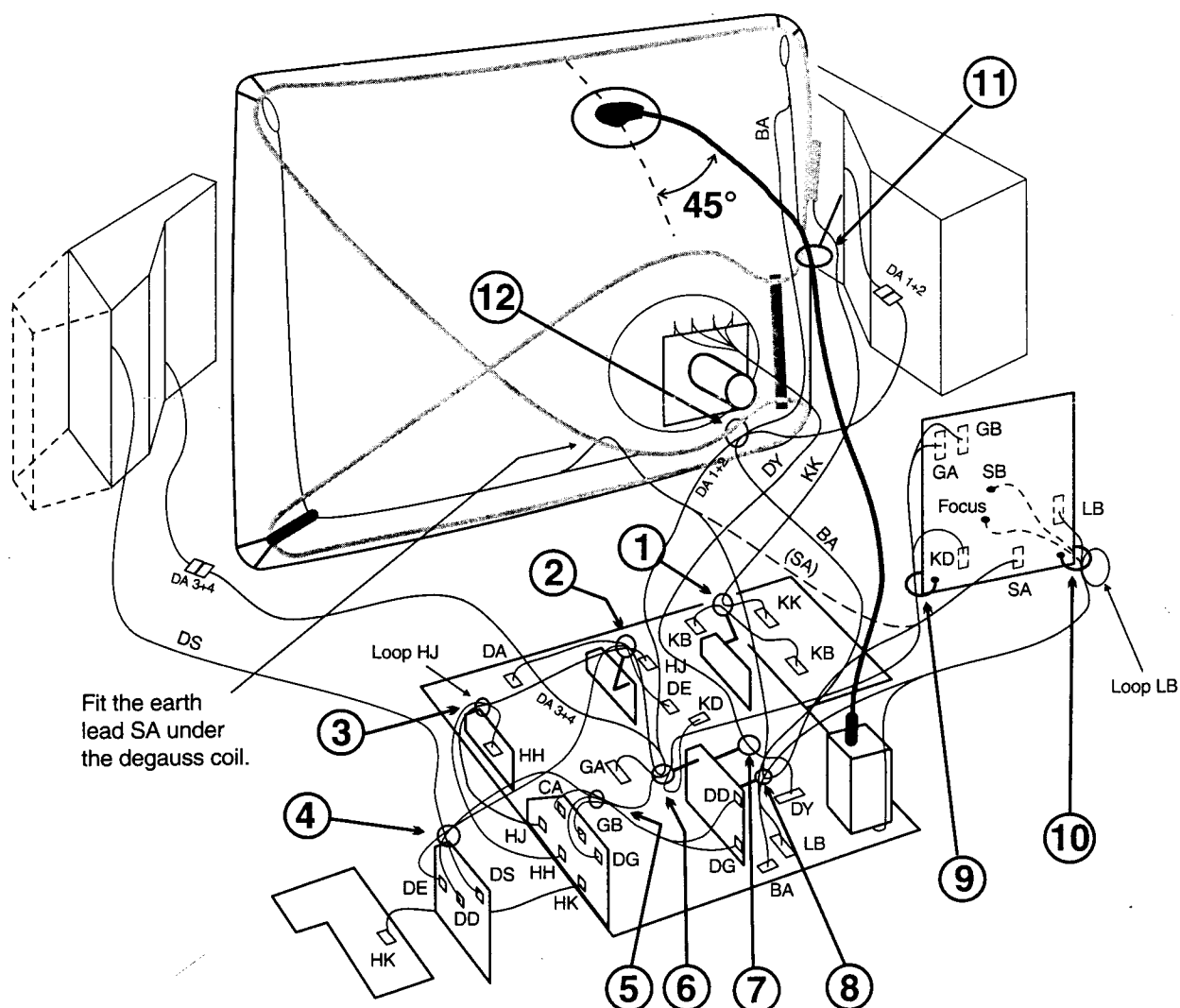


fig. 1.4C Lead-dressing diagram.

2 SERVICE ADJUSTMENT PROCEDURES

2.1 INTRODUCTION

Most service adjustments to these models are made using the remote control (figure 2.1A) with the TV in service mode. The adjustment data is stored in an EEPROM.

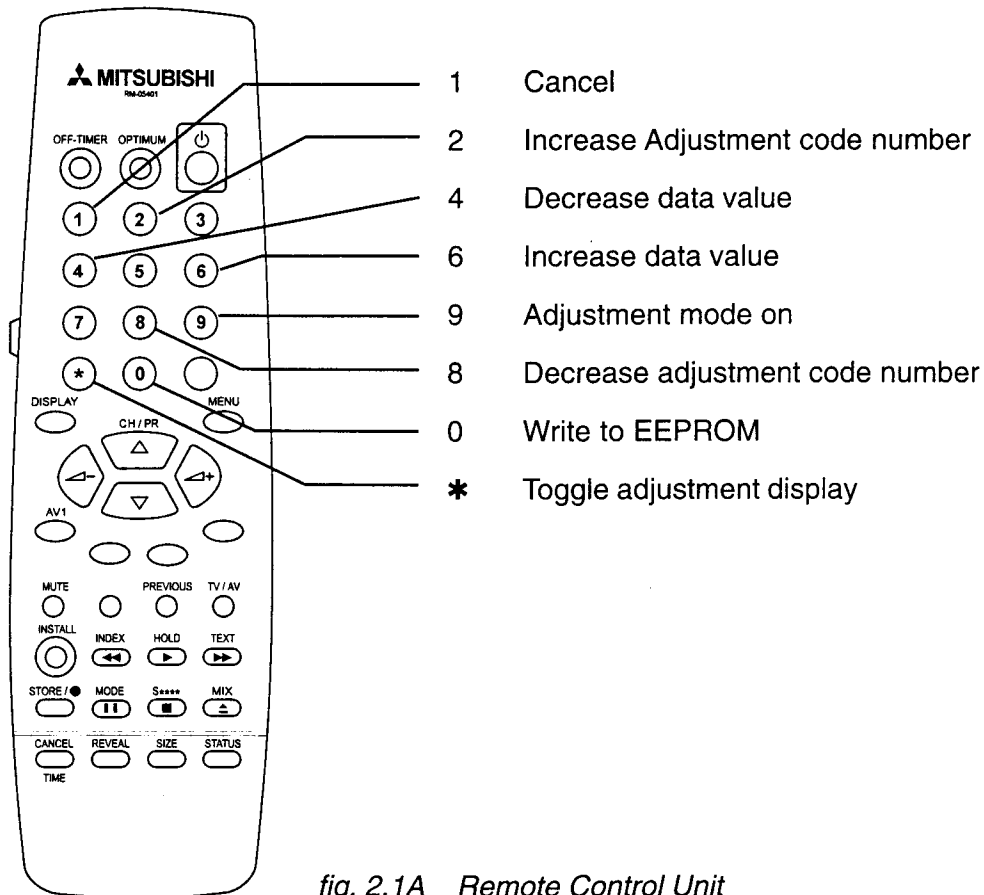


fig. 2.1A Remote Control Unit

2.1.1 Basic adjustment procedure

1. Turn the power on. With a small screwdriver, press the Service switch (S701, next to the aerial socket) and then button "9" within 5 seconds to enter service mode.
2. Press the "*" button to select either the VCJ or OPTION adjustment display (figs. 2.1B and C).

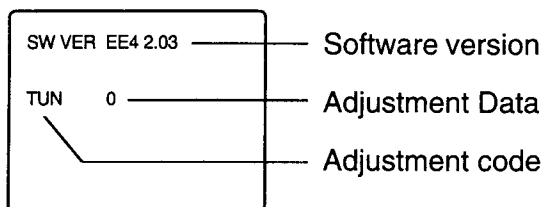


fig. 2.1B Options adjustment display

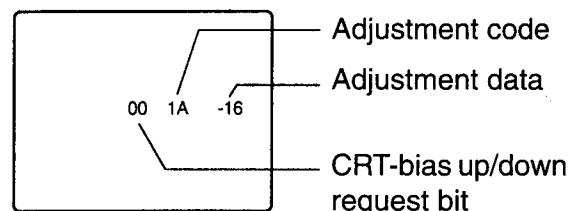


fig. 2.1C VCJ adjustment display

3. Press buttons "2" or "8" to increase or decrease the adjustment code number.
4. Press buttons "6" or "4" to increase or decrease the data value.
5. After completing your adjustments, press button "0" to write the adjustment data to the EEPROM.

To cancel a change, press button "1" (or the Standby button) before writing the adjustment to the EEPROM. All data adjusted since the last EEPROM write will be reset.

2.2 INITIALISING THE EEPROM

If you have replaced the EEPROM (IC702) or if for any reason the adjustment data has become corrupted it will be necessary to initialise the EEPROM.

2.2.1 Initialising the EEPROM

1. If necessary, switch off by the Main switch.
2. Hold in the service switch (S701, next to the aerial socket) while switching on by the Main switch.
3. Release the service switch after 3 seconds.
4. Switch off by the Main switch.
The EEPROM data values have now all been reset to their initial default values as shown in table 2.2C.
5. Switch on by the Main switch. Press the Service switch and then button "9" within 5 seconds to enter service mode.
6. Press the "*" button to select the OPTIONS adjustment display.
7. Press buttons "2" or "8" on the remote control to select the adjustment code.
8. Adjust the data value for each code using buttons "2" or "4" on the remote control according to table 2.2A below:

(Other adjustment codes will be displayed but need not be changed on these models.)

CODE:	TUN	SAT	AUD	ATS	STD	SYS	AVI	SPK	ABG	AI	AL	ADK	MNP	FFT	VOL	HYP	SCP	FMP
25/28AV1BD	0	0	10	1	1	2	2	0	02	02	00	15	70	1	74	1	20	23
25/28AV1BDS	0	1	10	1	1	2	2	0	02	02	00	15	70	1	74	1	20	23
25/28AV1LD	1	0	10	1	1	2	2	0	02	02	00	15	70	1	74	1	20	23

table 2.2A Data values for the OPTIONS adjustments.

9. Press the "0" button to write the changes to the EEPROM.
10. Press the "*" button to select the VCJ adjustment display.
11. Press buttons "2" or "8" on the remote control to select the adjustment code.
12. Adjust the data value of each code using buttons "2" or "4" on the remote control according to table 2.2B below:

(Other adjustment codes will be displayed but need not be changed on these models.)

CODE:	07	11	12	19	1B	1C
25AV1BD/BDS/LD	-7	001	111	-3	-11	-2
28AV1BD/BDS/LD	-7	001	111	-2	-9	-3

table 2.2B Data values for the VCJ adjustments.

13. Press the "0" button to write the changes to the EEPROM.

2.2.2 EEPROM Default data values.

These values are adequate to allow the set to be adjusted.

VCJ data values			OPTIONS data values		
CODE	FUNCTION	DATA VALUE	ITEM	DESCRIPTION	DATA VALUE
00	V-AMP	-16	TUN	TUNER TYPE	0
01	V-CORRECT	-31	SAT	SATELLITE ENABLE	0
02	P-AMP	+05	AUD	AUDIO SYSTEM	00
03	TILT	-12	ATS	AUTO TUNING SORT	0
04	V-LIN	+23	STD	RECEPTION STANDARD	0
05	C-CORRECT	-09	SYS	COLOUR SYSTEM	0
06	H-AMP	-22	AVI	NO. OF AV INPUTS	0
07	16x9 - SW.RGB-MATRIX	-07	AVD	AV DUBBING	-
08	V-SHIFT	+02	EEX	CHASSIS TYPE	-
09	H-PHASE	+10	SPK	SPEAKER SW ENABLED	1
0A	B-DRIVE	+01	EEP	EEPROM SIZE	-
0B	G-DRIVE	+01	ABG	AGC GAIN - BG	10
0C	R-DRIVE	+01	AI	AGC GAIN - I	10
0D	CONTRAST	+14	AL	AGC GAIN - L	10
0E	BRIGHT	+01	ADK	AGC GAIN - DK	10
0F	COLOUR-SAT	+10	MNP	NICAM PRESCALE	70
10	NTSC-TINT	00	TXT	TELETEXT TYPE	-
11	SHARP	111	FFT	FAST / TOP TEXT	0
12	PAL-LUMA-DELAY	111	VOL	VOLUME PRESCALE	70
13	SECAM-LUMA-DELAY	111	HYP	HYPERSOUND	0
14	V-AMP-60	00	SCP	SCART PRESCALE	1B
15	P-AMP	00	FMP	FM PRESCALE	23
16	H-AMP-60	00			
17	V-SHIFT-60	00			
18	H-PHASE-60	00			
19	H-PHASE-TEXT	00			
1A	H-PHASE-SECAM	00			
1B	H-PHASE-RGB	00			
1C	P-AMP-16:9	00			
1D	358NTSC-LUMA-DELAY	111			
1E	443NTSC-LUMA-DELAY	111			

table 2.2C EEPROM Default data values.

2.3 VIF CIRCUITS

2.3.1 RF-AGC

VR101 (adjacent to the tuner)

1. Connect an RF signal such as an off-air broadcast.
2. Check the AFT is on for the current channel.
3. Adjust VR101 so that the picture and sound exhibit no noise, beat or intermodulation distortion.

2.4 DEFLECTION CIRCUITS

2.4.1 Important notes

Before making any adjustments, if you have changed the CRT, FLYBACK TRANSFORMER or made any changes in the deflection circuits; adjust the CRT bias as described in 2.6.1 steps 1 ~ 6 (*Video Circuits – Screen control*).

Check the VERTICAL BREATHING CORRECTION as follows:

1. Select the VCJ adjustment display.
2. Set the adjustment code to "01" with buttons "2" or "8" on the remote control.
3. If necessary, adjust the data value to "-31" using buttons "4" or "6" on the remote control.

2.4.2 Horizontal centre

Code 09 (H-PHASE)

1. Connect a VCR and play a PAL-Monoscope alignment tape.
2. Select the VCJ adjustment display.
3. Set the adjustment code to "09" with buttons "2" or "8" on the remote control.
4. Adjust the horizontal position with buttons "4" or "6" on the remote control.

2.4.3 Horizontal width

Code 06 (H-AMP)

1. Connect a VCR and play a PAL-Monoscope alignment tape.
2. Select the VCJ adjustment display.
3. Set the adjustment code to "06" with buttons "2" or "8" on the remote control.
4. Adjust horizontal width with the buttons "4" or "6" on the remote control.

2.4.4 East-West PCC

Code 05 (CORNER CORRECTION)

Code 03 (PARABOLA TILT)

Code 02 (PARABOLA AMP)

1. Connect an RF PAL Crosshatch signal.
2. Select the VCJ adjustment display.
3. Set the adjustment code to "05" with buttons "2" or "8" on the remote control.
4. Adjust the data value to "-25" with buttons "4" or "6" on the remote control.
5. Set the adjustment code to "03" with buttons "2" or "8" on the remote control.

6. Watching the second vertical line in from both sides of the screen (figure 2.4A), make any upper and lower distortion symmetrical using buttons "4" or "6" on the remote control.
7. Set the adjustment code to "02" with buttons "2" or "8" on the remote control.
8. Adjust the straightness of both vertical lines (figure 2.4B) using buttons "4" or "6" on the remote control.
9. Repeat steps 1 to 8 above if necessary.
10. Connect a VCR and play a PAL-Monoscope alignment tape.
11. Make sure the horizontal width and horizontal centre are correct. If necessary readjust Horizontal Centre ("09") and Horizontal Width ("06") again.

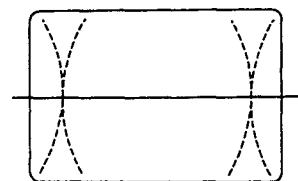


fig. 2.4A

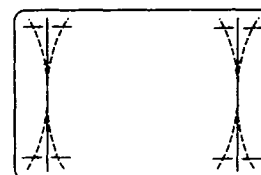


fig. 2.4B

2.4.5 Height and linearity

Code 00 (V-AMP)

Code 04 (V-LIN)

1. Connect a VCR and play a PAL-Monoscope alignment tape.
2. Select the VCJ adjustment display.
3. Set the adjustment code to "00" (V-AMP) with buttons "2" or "8" on the remote control.
4. Adjust the circle to a true circle with buttons "4" or "6" on the remote control.
5. Set the adjustment code to "04" (V-LIN) with buttons "2" or "8" on the remote control.
6. Adjust the linearity to be the same for the top and bottom halves of the circle using buttons "4" or "6" on the remote control.
7. Set the adjustment code to "00" (V-AMP) with buttons "2" or "8" on the remote control.
8. Readjust V-AMP with buttons "4" or "6".
9. Repeat the steps above, if necessary.

2.4.6 Vertical centre

Code 08 (V-SHIFT)

1. Connect a VCR and play a PAL-Monoscope alignment tape.
2. Select the VCJ adjustment display.
3. Set the adjustment code to "08" (V-SHIFT) with buttons "2" or "8" on the remote control.
4. Adjust the centre line of picture to be within ± 3 mm from the vertical centre on the screen using buttons "4" or "6" on the remote control.

2.4.7 60Hz Deflection circuit offsets

Code 14 (V-AMP 60)

Code 15 (P-AMP 60)

Code 16 (H-AMP 60)

Code 17 (V-SHIFT 60)

Code 18 (H-PHASE 60)

1. Connect an RF 60Hz Crosshatch signal.
2. Select the VCJ adjustment display.

3. Select each adjustment code in turn with buttons "2" or "8" on the remote control and adjust each item to the figures shown in table 2.4C below using buttons "4" or "6" on the remote control.

CODE:	14	15	16	17	18
25AV1BD/BDS/LD	+8	+1	-2	+14	-4
28AV1BD/BDS/LD	+7	+2	-2	+8	-5

table 2.4C 60Hz adjustment offsets

2.5 CRT CIRCUITS

2.5.1 White balance

Code 0A (B-DRIVE)

Code 0B (G-DRIVE)

Code 0C (R-DRIVE)

1. Connect a VCR and play a PAL-Monoscope alignment tape.
2. Select the VCJ adjustment display.
3. Set the adjustment codes to "0A", "0B" and "0C" in turn and pre-adjust each to "0".
4. Adjust codes "0A" and "0C" to adjust the white balance.

2.5.2 Focus

FOCUS control on the Flyback Transformer

1. Connect an RF signal such as an off-air broadcast.
2. Adjust the FOCUS control for the best overall focus.

2.6 VIDEO CIRCUITS

Perform the following adjustments after adjusting the Deflection circuits. Allow the TV to warm up for 20 minutes before proceeding

2.6.1 Brightness and Contrast

SCREEN control on the Flyback Transformer

Code 0F (COLOUR SATURATION)

Code 0E (BRIGHTNESS)

Code 0D (CONTRAST)

BEAM CURRENT (using connector TP adjacent to the Flyback Transformer)

1. Connect an RF Crosshatch signal.
2. Select the VCJ adjustment display.
3. Make sure that the Screen Up/Down Request Bit is set to "00". If not, adjust the SCREEN control on the Flyback Transformer.
4. Change the external signal to a Colour-bar.
5. Readjust the SCREEN control to give "00".
6. Repeat steps 1 to 5 until the Screen Up/Down Request Bit is "00" for both signals.
7. Connect an RF Colour-bar signal.
8. Set the adjustment code to "0F" with buttons "2" or "8" on the remote control.
9. Adjust the data value to "-32" with buttons "4" or "6" on the remote control.

10. Set the adjustment code to "0E" with buttons "2" or "8" on the remote control.
11. Adjust using buttons "4" or "6" so that a slight difference in brightness can be seen between blue and black areas.
12. Set the adjustment code to "0D" with the buttons "2" or "8" on the remote control.
13. Connect a DC ammeter's "+" lead to connector TP pin 1 on the MAIN-PCB and the "-" lead to connector TP pin 2.
14. Adjust the beam current using buttons "4" or "6" on the remote control to $1300 \pm 20 \mu\text{A}$ for 28AV1BD / BDS / LD or $1000 \pm 20 \mu\text{A}$ for 25AV1BD / BDS / LD.
15. Check, and if necessary, readjust the BRIGHTNESS, code "0E".
16. Check that the Screen Up/Down Request Bit is "00". If not, repeat steps 1 to 13 above.
17. Now proceed to the Colour Output adjustment.

2.6.2 Colour output

Make this adjustment only after adjusting the White Balance, Brightness and Contrast.

Code 0F (COLOUR SATURATION)

1. Connect an RF Colour-bar signal.
2. Select the VCJ adjustment display.
3. Set the adjustment code to "0F" with buttons "2" or "8" on the remote control.
4. Connect an oscilloscope to the junction of R673 and IC660 Pin 9 (BLUE-OUT) on the CRT PCB).
5. Make adjustments using buttons "4" or "6" on the remote control until the waveform is as shown in figure 2.6A.
6. Increase the resulting data value by five steps.

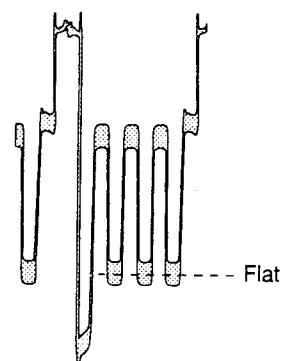


fig. 2.6A

2.7 POWER CIRCUIT

2.7.1 B4 Voltage

VR951 (on main PCB next to the SMT)

1. Connect a VCR and play a PAL-Monoscope alignment tape.
2. Push the OPTIMUM button on the remote control.
3. Connect a DC voltmeter's "+" lead to TP91 on the MAIN PCB and the "-" lead to GROUND.
4. Adjust VR951 so that the voltage is $145 \pm 2\text{V}$.

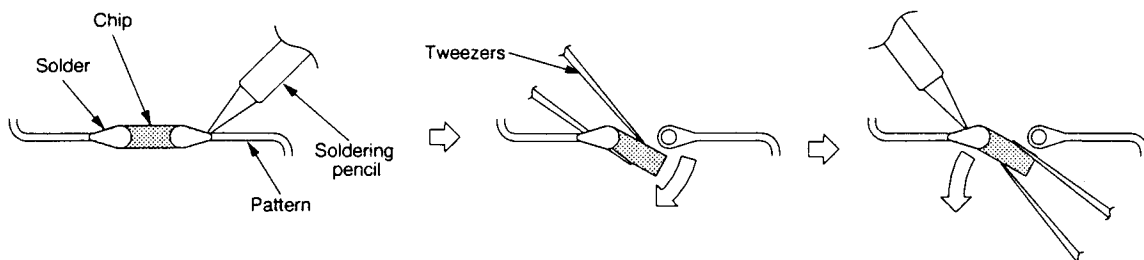
3 CHIP PARTS REPLACEMENT

Some resistors, shorting jumpers (0Ω resistor), ceramic capacitors, transistors and diodes are chip parts (i.e. surface mount or SMD parts). When replacing these parts, note the following precautions:

- Use fine tipped, well insulated soldering iron of about 30 watts and tweezers.
- Melt the solder and remove the Chip Parts carefully so as not to tear off the copper foil from the printed circuit board.
- Discard removed chips, do not re-use them.
- Do not apply heat for more than 3 seconds to new Chip Parts.
- Avoid using a rubbing action when soldering.
- Take care not to scratch or damage the Chip Parts when soldering.
- Supplementary cementing is not required.

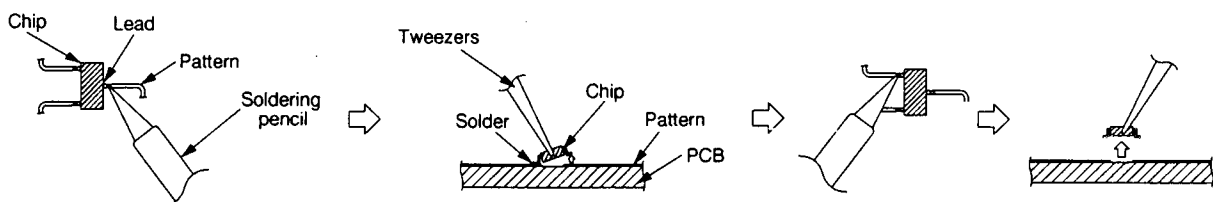
3.1 Removal of Chip Resistors, capacitors, etc.

1. Grasp the part with tweezers. Melt the solder at both sides alternately and remove one side of the part with a twisting motion.
2. Melt the solder at the other side and remove the part.



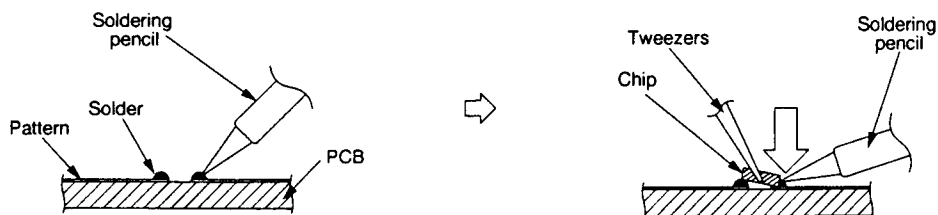
3.2 Removal of Chip Transistors

1. Melt the solder on one lead and lift that side upward.
2. Simultaneously melt the solder of the two remaining leads and lift the part from the PCB.



3.3 Replacement

1. Pre-solder the contact points on the circuit pattern.
2. Press the part downward with tweezers and apply the soldering iron as shown in the figure.



4 VIDEOCRYPT DECODER

The VideoCrypt decoder PCB is only serviceable by Mitsubishi service department.

In the event of a fault on this PCB, please follow this procedure:

1. Contact the Mitsubishi consumer spares department to request an advance replacement VideoCrypt decoder PCB.
2. Upon receipt of the replacement PCB, complete the enclosed form and return it with the faulty PCB, in the packaging provided.

Failure to return the PCB within 30 days will incur full replacement PCB costs.

NOTE

The plastic PCB frame, connecting lead and fixing screw should be retained as the replacement PCB is supplied *without* these items.

User Guide

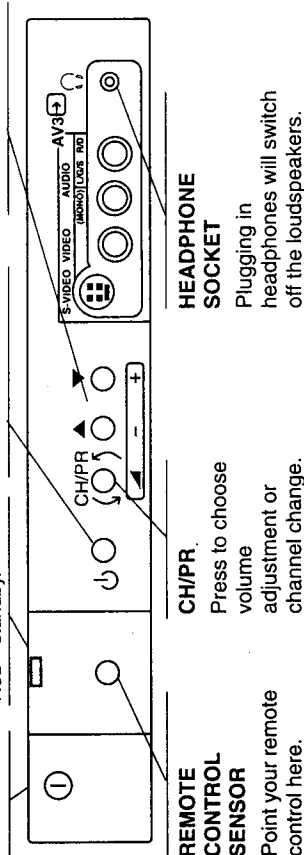
TV CONTROLS

MAINS ON/ OFF
Press to switch the TV on or off.

POWER ON/ STANDBY lamp
Green = TV on
Amber = Dubbing mode (See page 26)
Red = standby.

STANDBY
Press to switch the TV on from standby. Press again to switch it back to standby.

Press these buttons to change channel up or down by one number, or to adjust the volume up or down.



THE REMOTE CONTROL

STANDBY

Press to switch on from standby.
Press again to switch back to standby.

OFF-TIMER

Used to programme a switch-off time.
See "OFF-TIMER"

VCR SWITCH

Press and hold this button to operate the VCR functions.
(Mitsubishi VCRs only).

DISPLAY

Press to display channel and AV mode information, press again to cancel. If a menu screen is displayed, you can press this button to turn it off.

VOLUME UP/DOWN

Press the Δ + button to increase volume and the ∇ - button to decrease volume.

PREVIOUS

Pressing this button changes the channel to the previous one selected. Useful for switching quickly between two channels. Also switches from an AV input back to TV.

This button is also used during Teletext operation to select the previous page.

MUTE

Press to switch off the sound. Press again (or press a volume button) to switch the sound back on.

INSTALL

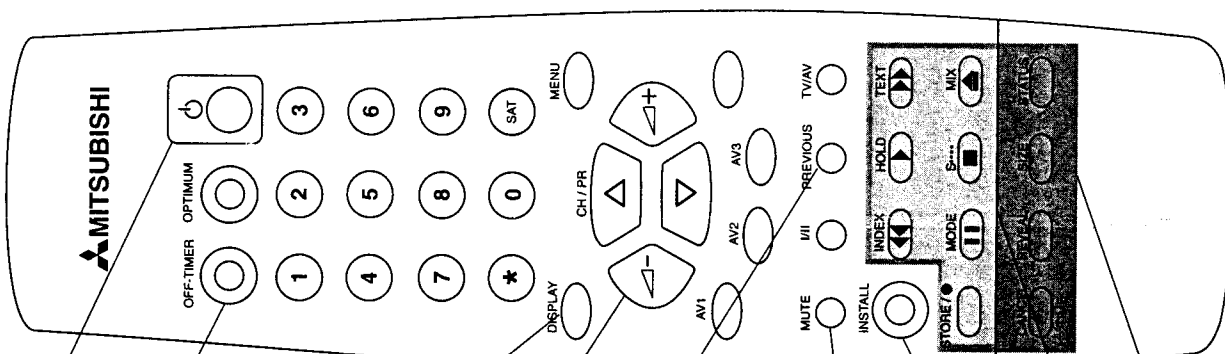
Press to switch on and switch off the INSTALL menu.
See "INSTALL MENU"

VCR BUTTONS

For operating a Mitsubishi VCR. (Use while holding VCR switch).

TELETEXT BUTTONS

See "TELETEXT"



OPTIMUM

Press to return to the factory pre-set levels for all the picture settings.
See "MENU SYSTEM"

PROGRAMME NUMBER

Press to select a channel position from 0 to 9. To select a higher number, for example 16, first press "*" and then "1" and "6".

You may also switch the TV on from standby by pressing any single number button.

SAT

Press this button followed by any number button to select a satellite channel. To select a higher number, for example 54, press SAT followed by "*" and then "5" and "4".

Also used to select satellite menu mode.
See "SATELLITE SYSTEM"

MENU

Press to switch on, change and switch off the menu.
See "MENU SYSTEM"

CH/PR Δ ∇

Press these buttons to change the channel up or down by one number.

COLOUR BUTTONS

Used for MENU adjustments, Teletext selection and for selecting an AV input.
See "MENU SYSTEM", "TELETEXT" and "AV CONNECTIONS"

TV/AV

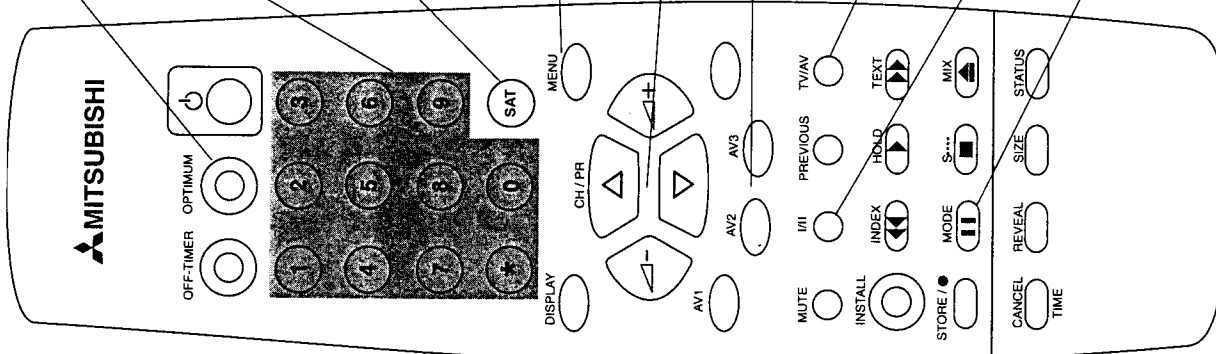
Press to switch between AV input or TV operation.
See "AV CONNECTIONS"

SOUND MODE I/II

Used to select a sound source during a NICAM broadcast.
See "NICAM STEREO"

MODE

Press to switch Subtitles on during normal viewing (if available). Press the CANCEL button to cancel.
See "MENU SYSTEM"



INSTALL MENU

Press the **INSTALL** button to display the **INSTALL MENU**.

You use the colour buttons **RED GREEN YELLOW** and **BLUE** to make selections from the **INSTALL MENU**.

DISPLAY LANGUAGE

Press the **RED** button to change the language—English, German, French or Dutch.
Press the **INSTALL** button to switch off the display.

CENTRE MODE

This control should be set to **NORMAL**. However, if you are *not* using the centre speaker with your TV you should set this control to **PHANTOM**. You are advised to connect and use the centre speaker, as the sound quality will be reduced without it.
Use the $\blacktriangle$ or $\blacktriangledown$ buttons to change this setting.

See "DOLBY PRO LOGIC SURROUND" starting on page 27 for more details.

TUNING

This TV has 90 programme positions (0...89) that can be tuned to receive different channels. This TV is designed to receive broadcasts to the standard: PAL I, UHF channels A to C and cable channels S1 to S1 (VB1) and VHF channels D to J and cable channels S11 to S41 (VB2).

Note that BD and BDS models will only receive on the UHF band.

AUTOMATIC TUNING

1. Press the **INSTALL** button to display the **INSTALL MENU**.

2. Start the Auto-Tuning system by pressing the **GREEN** button *twice* (Press once to select **AUTO-TUNING**, press a second time to confirm), the Auto-Tuning display appears.

It will take a few minutes for the TV to find, name and store all the available stations. Auto-Tuning searches the lower VHF bands, VB1 and VB2, and then the UHF band.

(BD and BDS models search UHF band only).

When Auto-Tuning is complete, the Auto-Tuning display disappears and the TV switches to programme position 1 (BBC1 in the UK, RTE1 in Ireland).

NB You might find programme positions after position 5 filled with duplicated or weak stations. For details of moving or deleting these stations refer to "MOVING and DELETING A PROGRAMME POSITION" on page 18.

MOVING and DELETING A PROGRAMME POSITION

1. Press the **INSTALL** button to display the **INSTALL MENU**.
2. Select **SHUFFLE** from the **INSTALL MENU** by pressing the **YELLOW** button.
3. Use $\blacktriangle$ or $\blacktriangledown$ to highlight in blue the position you wish to **MOVE** or **DELETE**.

TO MOVE THE SELECTED POSITION:

- a. Press the **YELLOW** button. The blue highlight now turns red.
- b. Use $\blacktriangle$ or $\blacktriangledown$ to highlight in blue the new position you wish to move to.
- c. Press the **YELLOW** button *twice* to move the programme position. * Programmes between the new and old positions will move up or down to fill the gap.

TO DELETE THE SELECTED PROGRAMME POSITION:

Press the **GREEN** button *twice* to delete this position. * Programmes after the deleted position will move up to fill the gap.

4. Press the **INSTALL** button to exit the **SHUFFLE MENU** and store the settings.

* The first press displays "O.K." at the bottom of the screen. If you change your mind and do not wish to move or delete this position—wait. The "O.K." will disappear after a few seconds.

SHUFFLE MENU				
PR	NAME	SKIP	PR	NAME
00	----	OFF	05	----
01	BBC1	----	06	BBC1
02	BBC2	----	07	BBC2
03	CH-4	----	08	ITV
04	----	OFF	09	CH-4

SHUFFLE MENU				
PR	NAME	SKIP	PR	NAME
00	----	OFF	05	----
01	BBC1	----	06	BBC1
02	BBC2	----	07	BBC2
03	CH-4	----	08	ITV
04	----	OFF	09	CH-4

SHUFFLE MENU				
PR	NAME	SKIP	PR	NAME
00	----	OFF	05	----
01	BBC1	----	06	BBC1
02	BBC2	----	07	BBC2
03	CH-4	----	08	ITV
04	----	OFF	09	CH-4

SHUFFLE MENU				
PR	NAME	SKIP	PR	NAME
00	----	OFF	05	----
01	BBC1	----	06	----
02	BBC2	----	07	BBC1
03	ITV	----	08	BBC2
04	CH-4	----	09	CH-4

PROGRAMME SKIP

This TV has a "skip" feature which allows you to pre-set a programme number so that you skip over it when you change channels using the $\blacktriangle$ or $\blacktriangledown$ buttons.

1. Press the **INSTALL** button to display the **INSTALL MENU**.

2. Select **SHUFFLE** from the **INSTALL MENU** by pressing the **YELLOW** button.

3. Use $\blacktriangle$ or $\blacktriangledown$ to highlight the position you wish to skip and press the **BLUE** button to switch from **SKIP OFF** to **SKIP ON**.

4. Repeat step 3 for other programme numbers as required.

5. Press the **INSTALL** button to exit the **SHUFFLE MENU** and store the settings.

SHUFFLE MENU				
PR	NAME	SKIP	PR	NAME
00	----	OFF	05	ON
01	BBC1	----	06	----
02	BBC2	----	07	BBC1
03	ITV	----	08	BBC2
04	CH-4	----	09	CH-4

CHANGING THE PROGRAMME NAME

1. Press the **INSTALL** button to display the **INSTALL MENU**.
2. Select **SHUFFLE** from the **INSTALL MENU** by pressing the **YELLOW** button.

SHUFFLE MENU				
PR	NAME	SKIP	PR	NAME
00	V	OFF	05	ON
01		OFF	06	OFF
02	BBC2	OFF	07	BBC1
03	ITV	OFF	08	BBC2
04	CH-4	OFF	09	CH-4

3. Select the programme number you wish to name (or re-name) using Δ or ∇ .
4. Press the **RED** button to display a pointer under the name.
5. Press Δ or ∇ to change the letter (or number) above the pointer.
A blank space is shown as " ".
6. Press the **RED** button to move the pointer to the right and repeat 5.
7. Repeat steps 5 and 6 to complete the name.
8. Press the **INSTALL** button to exit the **SHUFFLE MENU** and store the settings.

SHUFFLE MENU				
PR	NAME	SKIP	PR	NAME
00	V	OFF	05	ON
01		OFF	06	OFF
02	BBC2	OFF	07	BBC1
03	ITV	OFF	08	BBC2
04	CH-4	OFF	09	CH-4

MANUAL TUNING

To tune a station manually, for example, to tune in your VCR or a new station.

1. Press the **INSTALL** button to display the **INSTALL MENU**.
2. Select **MANUAL TUNING** by pressing the **BLUE** button.
3. Press Δ or ∇ to move the blue highlight to the channel guide.
4. Select a programme number using the number buttons. Press one number button for a single number or press "" then 2 buttons for a 2 digit number.
5. Start tuning by pressing Δ or ∇ (for tuning up or down the band). The channel guide turns **RED** while searching then **WHITE** after a station is found.
*If the channel guide does not turn red, press Δ or ∇ to highlight **AFT** (Auto Fine Tuning) and switch it on by pressing Δ or ∇ .*

MANUAL TUNING MENU	
PROG	01
CHANNEL	
AFT	ON
NAME	
SYSTEM	AUTO PAL

FINE TUNING

Sometimes it may be necessary to fine tune a station manually, in the case of abnormal interference, for example.

- a. Press Δ or ∇ to highlight **AFT** and switch it off by pressing Δ or ∇ .
 - b. Press Δ or ∇ to highlight the channel guide and adjust the fine tuning using the Δ or ∇ buttons.
6. When you have finished your tuning adjustments, press the **STORE** button to store the new settings.
 7. Press the **INSTALL** button to exit the **MANUAL TUNING** menu.

MANUAL TUNING MENU	
PROG	01
CHANNEL	
AFT	ON
NAME	
SYSTEM	AUTO PAL

SATELLITE SYSTEM (BDS MODELS ONLY)

This TV can receive satellite broadcasts as well as normal television broadcasts. There are 150 satellite channels, many of them pre-tuned as shown in the separate satellite channel list. Some of these channels are scrambled, so if you wish to see them, you must pay a subscription to get a viewing card.

See "VIEWING SCRAMBLED CHANNELS" below.

BEFORE YOU START

Before you can use the satellite module of your Mitsubishi television you must have a satellite dish fitted and connected to your TV.

It is important that the dish is aimed in the exact direction of the satellite you wish to receive from and that you have all the necessary cables required to connect the dish to your television.

NB You must make sure that the LNB settings in the SAT SET-UP MENU are correct for the type of LNB attached to your dish.

See "MAKING ADJUSTMENTS TO THE LNB SETTINGS" on page 23.

SELECTING A SATELLITE CHANNEL

You can directly select a satellite channel by pressing the **SAT** button followed by the appropriate **NUMBER** button. To select a higher number, for example 54, press **SAT** followed by "" and then the three numbers "0", "5" and "4".

You may wish to set up some satellite channels so that you can select them with the Δ or ∇ buttons or the number buttons (i.e., without using the **SAT** button).

See "QUICK ACCESS TO SATELLITE CHANNELS" on page 20 for details.

VIEWING SCRAMBLED CHANNELS

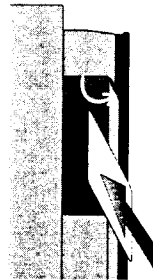
You will find that some channels are scrambled. To view these channels you will need a subscription card. From time to time, scrambled channels become visible and supply subscription information.

Your TV has a built-in internal decoder to descramble VideoCrypt programmes.

Open the door as shown to reveal the card slot.

Check your card is the right way round.

Always insert the card so that the metal pad faces downwards and is away from you. Make sure that you push the card all the way in.



Some channels operate a "PAY PER VIEW" system which requires a different kind of payment card. This is a system in which you only pay for certain "events" such as a football match, film premiere and so on.

See "PAY PER VIEW CONTROL" on page 23 for details.

NB Some methods of scrambling require an external decoder. You can attach an external decoder to the AV1 or AV2 SCART sockets found at the rear of the TV. See "AV CONNECTIONS" on page 30 for details of the SCART connectors and "USING AN EXTERNAL DECODER" on page 24 for details of setting up the system.

MANUALLY TUNING A SATELLITE CHANNEL

When tuning a satellite channel you should find out the frequency, LNB polarity, video settings and de-emphasis settings for that station. This can be found in any popular satellite television magazine.

1. Press the **SAT** button and key in any number button to select a satellite channel.
2. Press the **SAT** button followed by the **MENU** button. The **SAT SET-UP MENU** appears.

3. Press the **GREEN** button to display the SAT MANUAL TUNING MENU.

UNB P01 ARITY H TONE
VIDEO SETTINGS PAL
DECODER INTERNAL
AUDIO SETTINGS STEREO A
LEFT 7.02
RIGHT 7.20
DE-EMPHASIS NRS
NAME SKY-NEWS

4. Use Δ or ∇ to highlight **PROGRAM** and select the program number you wish to manually tune using $\swarrow$ + or $\searrow$ -.

5. Use Δ or ∇ to highlight LNB POLARITY and switch to H, V, V TONE or H TONE as required using $\swarrow$ + or $\searrow$ -.

6. Use Δ or ∇ to highlight **DE-EMPHASIS** and select **PANDA**, **NRS**, **50us**, **75us** or **J17** as required using $\triangleleft$ + or $\triangleleft$ -.
7. If necessary, use Δ or ∇ to highlight **DECODER** and switch to **NONE** using $\triangleleft$ + or $\triangleleft$ -.

ch to **NORMAL**, **PAL**, **MAC** or control allows for screen

8. Use Δ or ∇ to highlight **VIDEO SETTINGS** and scroll to **BASEBAND** as required (The **RADIO** setting of this menu is blanking while you listen to satellite radio stations). See "SATELLITE RADIO AND FOREIGN LANGUAGE details."

9. Use Δ or ∇ to highlight **FREQUENCY**.
10. If you know the correct frequency for the **NUMBER** buttons. Otherwise, hold find the channel you want.

and switch to **INTERNAL** (for
decoder connected to AV1
and to AV2 SCART socket).
24 for more details.

11. If necessary, use Δ or ∇ to highlight **DECODER1** (decoder) or **DECODER2** (decoder) in the VideoCrypt scrambled channels, **EXTERNAL1** (SCART socket) or **EXTERNAL2** (decoder connector). See *"USING AN EXTERNAL DECODER" on page 10*.
12. Press the **STORE** button to memorise the new settings and confirm the action.

13. Repeat steps 4~12 for other satellite channels you wish to manually tune.
14. Press the **GREEN** button to exit the SAT MANUAL TUNING MENU.

NB Some satellite television channels also broadcast radio stations and extra sound channels with foreign languages. It is possible to change the audio frequency of your satellite tuner to listen to these radio stations or to change the language of a satellite channel.

You will find information about the different languages in any popular satellite television magazine.

SATELLITE SYSTEM (BDS MODELS ONLY)

SATELLITE RADIO AND FOREIGN LANGUAGES

Some satellite television channels also broadcast radio stations and extra sound channels with foreign languages. It is possible to change the audio frequency of your satellite tuner to listen to these radio stations or to change the language of a satellite channel.

You will find information about the different languages in any popular satellite TV magazine.

1. Press the **SAT** button, and key in the satellite channel number. To select a higher number, for example 54, press **SAT** followed by "5" and then the three numbers "0", "5" and "4".
2. Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.
3. Press the **GREEN** button to display the SAT MANUAL TUNING menu.

SCREEN BLANKING—RADIO

- a. If necessary, use Δ or ∇ to highlight **DECODER** and switch to **NONE** using $\triangleleft$ or $\triangleleft$.
 - b. Use Δ or ∇ to highlight **VIDEO SETTINGS**.
 - c. Use $\triangleleft$ or $\triangleleft$ to select **RADIO**. The screen will become blank. If you want to switch screen blanking off again, return **VIDEO SETTINGS** to the normal viewing position for the satellite channel.
4. Use Δ or ∇ to highlight **AUDIO SETTINGS**.
 5. Use $\triangleleft$ or $\triangleleft$ to select **MONO**, **STEREO A**, **STEREO B** or **MANUAL** as required. You will notice the **LEFT** and **RIGHT** sound frequencies changing. Adjust the control until *both* frequencies are correct for the radio station or language variant you wish to hear.

MANUALLY TUNING A RADIO STATION

- If a satellite channel has a lot of radio stations, it may be better to manually adjust the audio frequencies. In this case select **MANUAL** from the **AUDIO SETTINGS** control. Use Δ or ∇ to highlight **LEFT** or **RIGHT** and adjust the audio frequency using $\triangleleft$ or $\triangleleft$. You can also key in the frequency directly using the number buttons.
6. Press the **STORE** button to memorise the new settings.
 7. Press the **GREEN** button to exit the menu system.

CHANGING A SATELLITE CHANNEL NAME

1. Press the **SAT** button, and key in the satellite channel number. To select a higher number, for example 54, press **SAT** followed by "5" and then the three numbers "0", "5" and "4".
2. Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.
3. Press the **GREEN** button to display the SAT MANUAL TUNING MENU.
4. Use Δ or ∇ to highlight **NAME**. A pointer appears at the first letter or number in the channel name.
5. Use $\triangleleft$ or $\triangleleft$ to change the letter or number above the pointer.
6. Use Δ or ∇ to move the pointer to the right.
7. Repeat steps 5-6 until the channel name is complete.
8. Press the **STORE** button to memorise the new settings. The display flashes red to confirm the action.
9. Press the **GREEN** button to exit the SAT MANUAL TUNING MENU and store the new settings.

NB If you have copied a satellite channel onto a programme position for selection using the Δ , ∇ , or the number buttons, you can also change the channel name from the **SHUFFLE** menu. See "CHANGING THE PROGRAMME NAME" on page 19.

SAT	MANUAL	TUNING
PROGRAM	001	
FREQUENCY	11.698GHZ	
LNB POLARITY	H TONE	
VIDEO SETTINGS	PAL	
DECODER	INTERNAL	
AUDIO SETTINGS	MANUAL	
	LEFT 7.02	
	RIGHT 7.20	
DE-EMPHASIS	NRS	
NAME		

SAT	MANUAL	TUNING
PROGRAM	001	
FREQUENCY	11.698GHZ	
LNB POLARITY	H TONE	
VIDEO SETTINGS	PAL	
DECODER	INTERNAL	
AUDIO SETTINGS	MANUAL	
	LEFT 7.02	
	RIGHT 7.20	
DE-EMPHASIS	NRS	
NAME		

SAT	MANUAL	TUNING
PROGRAM	001	
FREQUENCY	11.698GHZ	
LNB POLARITY	H TONE	
VIDEO SETTINGS	PAL	
DECODER	INTERNAL	
AUDIO SETTINGS	STEREO A	
	LEFT 7.02	
	RIGHT 7.20	
DE-EMPHASIS	NRS	
NAME	SKY-NEWS	

SAT	MANUAL	TUNING
PROGRAM	001	
FREQUENCY	11.698GHZ	
LNB POLARITY	H TONE	
VIDEO SETTINGS	PAL	
DECODER	INTERNAL	
AUDIO SETTINGS	STEREO A	
	LEFT 7.02	
	RIGHT 7.20	
DE-EMPHASIS	NRS	
NAME	SKY-NEWS	

SAT	MANUAL	TUNING
PROGRAM	001	
FREQUENCY	11.698GHZ	
LNB POLARITY	H TONE	
VIDEO SETTINGS	PAL	
DECODER	INTERNAL	
AUDIO SETTINGS	MANUAL	
	LEFT 7.02	
	RIGHT 7.20	
DE-EMPHASIS	NRS	
NAME	SKY-NEWS	

SATELLITE EVENT TIMER

If you have a VCR connected to the AV2 SCART socket, you can set an "event timer" so that you can record different satellite channels at varying times. The "event timer" can be set so that you can record satellite channels up to 28 days in advance.

You can also select a "CURRENT" event. This starts an event immediately and also locks the satellite channel so that it cannot be changed (accidentally) while the event is being recorded. It is also possible to set "regular events" so that you can record the same channel at the same time daily or weekly.

NB To use this feature you should have AV2 DUBBING switched ON and the AV2 OUTPUT set to SAT.

See "AV2 DUBBING" on page 26 for details.

Some Mitsubishi VCRs have a connector which allows them to automatically activate the satellite event timer via a link lead.

See "SATELLITE CONTROL" on page 24 for details.

1. Press the **SAT** button and select a satellite channel.

2. Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.

3. Press the **YELLOW** button to display the SAT EVENT TIMER MENU.

4. Use Δ or ∇ to highlight **EVENT**.

5. Use Δ or ∇ to select an event number, or **CURRENT** if you want to set an event to start now.

6. Use Δ or ∇ to highlight **PROGRAM** and select the satellite channel you want to set this event for using Δ or ∇ .

SETTING REGULAR EVENTS:

- a. Use Δ or ∇ to highlight **REGULAR EVENT** and adjust to **DAILY** or **WEEKLY** using Δ or ∇ .
- b. Use Δ or ∇ to highlight **DAY** if necessary and select the day of the event using Δ or ∇ .

SETTING A SINGLE EVENT:

- a. Use Δ or ∇ to highlight **REGULAR EVENT** and adjust to **OFF** using Δ or ∇ .
- b. Use Δ or ∇ to highlight **DAY** and adjust to the day (up to 28 days ahead) that you want to set an event for (I.E., if today is a Monday tomorrow is "1st Tuesday" and next Monday is "1st Monday").
7. Use Δ or ∇ to highlight **START** and key in the starting time of the event using the number buttons.
8. Use Δ or ∇ to highlight **STOP** and key in the finishing time of the event using the number buttons.

NB If the starting time of an event occurs before the finishing time of a current event, the next event will start and interrupt the current one.

If you try to select a new channel while an event is in progress, the message "EVENT ENABLED" will appear on the screen. To cancel the event, select **CLEAR** from the SAT EVENT TIMER menu by pressing the **GREEN** button.

LOCKING SATELLITE CHANNELS

You can lock satellite channels so that they cannot be watched unless a 4 digit number is keyed in.

If you lock any satellite channels the satellite menus will also become locked. This is to prevent the re-tuning of a non-locked channel.

If you select a satellite channel which has been locked, you will be prompted for the PIN number. You will not be able to view the satellite channel unless you key in the correct PIN number.

The Personal Identification Number (PIN) is pre-set as "3030", but you can change this number if you want.

See "CHANGING THE PIN NUMBER" on page 23 for details.

LOCKING AND UNLOCKING A SATELLITE CHANNEL

1. Press the **SAT** button and select a satellite channel.
2. Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.
3. Press the **BLUE** button to display the SAT PROGRAMME LISTINGS.
4. Use Δ or ∇ to select the satellite channel you wish to lock or unlock.
5. Press the **RED** button to LOCK or UNLOCK this channel.

SAT PROGRAMME LISTINGS				
PR	NAME	LOCK	PR	NAME
000	SKY-1	--	005	VOX
001	SKY-NEWS	--	006	BRAVO
002	UK-GOLD	--	007	NICKELOD
003	SKYSPORT	--	008	DISCOVERY
004	EUROSPOR	--	009	CHILDREN

ENTER PIN XXXX

An "XXXX" prompt will appear.

6. Key in your PIN number now.
If you key in the wrong number, the "XXXX" prompt will reappear.
When you have keyed in the correct PIN number, the channel will LOCK or UNLOCK.

SAT PROGRAMME LISTINGS				
PR	NAME	LOCK	PR	NAME
000	SKY-1	--	005	VOX
001	SKY-NEWS	ON	006	BRAVO
002	UK-GOLD	--	007	NICKELOD
003	SKYSPORT	--	008	DISCOVERY
004	EUROSPOR	--	009	CHILDREN

7. Press the **BLUE** button to exit the SAT PROGRAMME LISTINGS and return to normal viewing.

SAT SET-UP MENU

Press the **SAT** button and select a satellite channel.

Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.

Press the **MENU** button again to switch off the display.

CHANGING THE PIN NUMBER

1. Use Δ or ∇ to highlight **NEW PIN NUMBER**.

2. Key in the *current* PIN number. If you key in the wrong number, the "XXXX" prompt will reappear.

When you have keyed in the correct PIN number, an "O.K." will appear.

3. Key in the new PIN number. The "O.K." will disappear in a few seconds.

SAT SET-UP MENU			
LNB TYPE	1	FSS-A 9.750	GHZ
	1T	FSS-B 10.000	GHZ
AFC		ON	
LNB POWER		ON	
CLOCK SET:	DAY	FRIDAY	
	HRS: MINS	16:50	
NEW PIN NUMBER	XX--		
PAY PER VIEW		AUTHORISE	

SETTING THE CLOCK

1. Use Δ or ∇ to highlight **DAY**.
2. Use Δ or ∇ to select the correct day of the week.
3. Use Δ or ∇ to highlight **HRS:MINS**.
4. Key in the correct time using the **NUMBER** buttons.

SAT SET-UP MENU			
LNB TYPE	1	FSS-A 9.750	GHZ
	1T	FSS-B 10.000	GHZ
AFC		ON	
LNB POWER		ON	
CLOCK SET:	DAY	FRIDAY	
	HRS: MINS	16:50	
NEW PIN NUMBER	XX--		
PAY PER VIEW		AUTHORISE	

PAY PER VIEW CONTROL

Use this control to authorise payment for a PAY PER VIEW event.

1. Use Δ or ∇ to highlight **PAY PER VIEW**.

SAT SET-UP MENU			
LNB TYPE	1	FSS-A 9.750	GHZ
	1T	FSS-B 10.000	GHZ
AFC		ON	
LNB POWER		ON	
CLOCK SET:	DAY	FRIDAY	
	HRS: MINS	16:50	
NEW PIN NUMBER	XX--		
PAY PER VIEW		AUTHORISE	

2. Press and hold Δ or ∇ for a few seconds to authorise payment and unscramble the channel. An "O.K." appears and the display briefly flashes red to confirm the action.

MAKING ADJUSTMENTS TO THE LNB SETTINGS

It is possible to make adjustments to the LNB settings from the SAT SET-UP MENU.

Press the **SAT** button and select a satellite channel.

Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.

LNB TYPE

It is important, when fitting your satellite dish, that you know the frequency of your LNB's local oscillator. If this does not match the **LNB TYPE** settings, you may receive the wrong channel, or no channel at all. These are the most common LNB types:

LNB TYPE	FREQUENCY RANGE	TYPICAL SATELLITES
9.750 FSS-A	10.700—11.800GHz	ASTRA 1A, 1B, 1C, 1D/ Intelsat / Eutelsat
10.000 FSS-B	10.920—12.050GHz	ASTRA 1, 1B, 1C / Intelsat / Eutelsat
11.475T-COM	12.425—13.525GHz	Telecom 2A, 2B, 1C

"**LNB TYPE**" shows the name of the LNB and the frequency (in GHz) of the LNB's local oscillator.

"**FREQUENCY RANGE**" shows the range over which you should tune during manual tuning of a satellite station. It is also possible to select **MANUAL**, which allows you to key in the LNB's local oscillator frequency (between 9 GHz and 12 GHz). This is used if your LNB is not one of the common types or if your LNB is slightly offset.

1. Use Δ or ∇ to highlight **LNB TYPE 1**.

SAT SET-UP MENU			
LNB TYPE	1	FSS-A 9.750	GHZ
	1T	FSS-B 10.000	GHZ
AFC		ON	
LNB POWER		ON	
CLOCK SET:	DAY	FRIDAY	
	HRS: MINS	16:50	
NEW PIN NUMBER	XX--		
PAY PER VIEW		AUTHORISE	

2. Select the LNB type using Δ or ∇ . If you select **MANUAL**, key in the frequency using the number buttons.

IF YOU HAVE A DUAL BAND LNB

If you have a dual band "tone switching" LNB, two band settings can be made to cover the upper and lower frequencies.

- a) Use Δ or ∇ to highlight **LNB TYPE 1T**.

SAT SET-UP MENU			
LNB TYPE	1	FSS-A 9.750	GHZ
	1T	FSS-B 10.000	GHZ
AFC		ON	
LNB POWER		ON	
CLOCK SET:	DAY	FRIDAY	
	HRS: MINS	16:50	
NEW PIN NUMBER	XX--		
PAY PER VIEW		AUTHORISE	

- b) Select the second LNB type using Δ or ∇ . If you select **MANUAL**, key in the frequency using the number buttons.

MAKING ADJUSTMENTS TO THE LNB SETTINGS (continued).

LNB POWER

Your television should provide power to the LNB *unless* the LNB is on a communal antenna. The normal setting for this control is **ON**.

If your LNB is on a communal antenna, it may be that it should not receive power from your television. If this is the case you should set this control to **OFF**.

1. Use Δ or ∇ to highlight **LNB POWER**.

SAT SET-UP MENU	
LNB TYPE	1 FSS-A 9.750 GHZ
IT	FSS-B 10.000 GHZ

AFC ON

LNB POWER	
CLOCK SET:	DAY FRIDAY
HRS:MINS	16:50
XX--	

NEW PIN NUMBER XX--
PAY PER VIEW AUTHORISE

AFC

Your receiver has been pre-set for Automatic Frequency Control (AFC). You should not need to change this unless you are trying to receive a very weak signal with a speckled picture. In this case, you can switch AFC off and adjust the LNB TYPE frequency slightly using the **MANUAL** setting of the **LNB TYPE** control.

See "LNB TYPE" on page 17 for details.

1. Use Δ or ∇ to highlight **AFC**.

SAT SET-UP MENU	
LNB TYPE	1 FSS-A 9.750 GHZ
IT	FSS-B 10.000 GHZ

AFC OFF

LNB POWER	
CLOCK SET:	DAY FRIDAY
HRS:MINS	16:50
XX--	

NEW PIN NUMBER XX--
PAY PER VIEW AUTHORISE

2. Switch **ON** or **OFF** using Δ or ∇ .

NB Adjustments to the AFC affect *all* the channels and you should therefore return the setting to its usual position when you are finished watching the weaker station.

USING AN EXTERNAL DECODER

It is possible to connect one or two external decoders to the AV1 and AV2 SCART sockets at the back of your TV.

See "AV CONNECTIONS" on page 30 for details of connecting equipment to the AV1 and AV2 SCART sockets.

NB Your TV has a built-in decoder to descramble VideoCrypt programmes.

1. Press the **SAT** button and key in the satellite channel number. To select a higher number, for example 54, press **SAT** followed by "5" and then the three numbers "0", "5" and "4".

2. Press the **SAT** button followed by the **MENU** button to display the SAT SET-UP MENU.

3. Press the **GREEN** button to display the SAT MANUAL TUNING MENU.

4. Use Δ or ∇ to highlight **DECODER**.

5. Use Δ or ∇ to select **NONE**, **EXTERNAL1** (decoder connected to AV1 SCART socket), **EXTERNAL2** (decoder connected to AV2 SCART socket) or **INTERNAL**.

6. Press the **STORE** button to memorise the new settings.

7. Press the **GREEN** button to exit the menu system.

SAT MANUAL TUNING	
PROGRAM	001
FREQUENCY	11.698GHZ
LNB POLARITY	H TONE
VIDEO SETTINGS	PAL

DECODER	
AUDIO SETTINGS	STEREO A
LEFT	7.02
RIGHT	7.20
NRS	
DE-EMPHASIS	
NAME	SKY-NEWS

SATELLITE CONTROL

Some Mitsubishi VCRs have a feature which allows them to change satellite channels automatically for recording different channels at different times. If your VCR has this feature, you will need to key the BRAND CODE "01" into your VCR to set the correct satellite type.

If your VCR has this control it will be able to activate the "event timer" of your TV automatically when recording a satellite channel.

See your VCR instructions for details of using this feature.

You will need a link lead to connect your VCR to your TV. This lead is available from your dealer and you should ask for "SATELLITE LEAD" part number 999D161010.

MENU SYSTEM

Press the **MENU** button to display a menu screen. If necessary, press again to display **MAIN MENU**. To select a sub-menu, press a colour button.

MAIN MENU

AV-MEMORY M1 M2 AV SAT

Select an AV-MEMORY by pressing $\triangle$ + or $\triangleleft$ - **PICTURE** **SOUND** **SPECIAL** **SET-UP**. There are 4 memory positions, M1, M2, AV and SAT which will store any changes you make to the sound or picture adjustments. This allows you to have 4 different sets of adjustments for different types of programmes.

PICTURE MENU

Press the **MENU** button to display a menu screen.

If the **PICTURE MENU** is not displayed, press the **RED** button.

In the **PICTURE** menu, you use the four buttons $\triangle$, ∇ , $\triangleleft$ + and $\triangleleft$ - to select and adjust the controls.

MEMORY

You can select an AV-MEMORY by pressing $\triangle$ + or $\triangleleft$ -.

COLOUR

Adjust the strength of the colours. Use skin colours to judge the best setting.

CONTRAST

The contrast should be adjusted to suit the light level of your surroundings.

BRIGHTNESS

Adjust the brightness so that the black parts of the picture are only just black.

SHARPNESS

Adjust the sharpness to change how sharp the picture looks.

TEMPERATURE

Adjust the colour temperature to a slightly warmer (red) or cooler (blue) tone.

TINT

This function is only available when watching an NTSC programme through an AV input. See "AV CONNECTIONS" on page 30 for further details.

Adjust the tint of the picture using skin colours to judge the best setting.

OPTIMUM

With the blue highlight on **MEMORY**, pressing the **OPTIMUM** button returns **all** the picture settings to the factory pre-set levels for the current AV Memory.

With the blue highlight on any picture control, pressing the **OPTIMUM** button returns only that control to the factory pre-set level.

MENU SYSTEM

SOUND MENU

Press the **MENU** button to display a menu screen.

If the **SOUND MENU** is not displayed, press the **GREEN** button.

In the **SOUND** menu, you use the four buttons $\triangle$, ∇ , $\triangleleft$ + and $\triangleleft$ - to select and adjust the controls.

MEMORY

You can select an AV-MEMORY by pressing $\triangle$ + or $\triangleleft$ -. There are 4 memory positions, M1, M2, AV and SAT which will store any changes you make to the sound adjustments.

BASS

Adjusts the level of the low-frequency sounds.

TREBLE

Adjusts the level of the high-frequency sounds.

LOUDNESS

Switch on or off using $\triangle$ + or $\triangleleft$ - to boost the bass level.

HYPER SOUND

Switch on or off using $\triangle$ + or $\triangleleft$ - to boost the very low frequency sounds.

*Note that **LOUDNESS** and **HYPER SOUND** cannot both be switched on at the same time.*

SURROUND

"SURROUND" is a system to create a surrounding stereophonic sound. There is a choice of 8 sound effects:

PRO LOGIC

Use when receiving stereo sound from a Dolby Surround encoded source. See "DOLBY PRO LOGIC SURROUND" on page 27 for details.

DISCO

Suited to small venue music, including jazz, cabaret and classical chamber music.

THEATRE

Suited to opera, rock and easy listening music.

CONCERT HALL

Suited to orchestral classical music and light orchestral music.

CATHEDRAL

Suited to organ music and New Age.

STADIUM

Suited to stadium rock and sporting events.

OFF

For normal mono or stereo sound.

PSEUDO STEREO

Creates the effect of stereo sound from a mono source.

OPTIMUM

With the blue highlight on **MEMORY**, pressing the **OPTIMUM** button returns **all** the sound setting except **LOUDNESS** and **HYPER SOUND** to the factory pre-set levels for the current AV Memory.

With the blue highlight on any sound control, pressing the **OPTIMUM** button returns only that control to the factory pre-set level.

SPECIAL MENU

Press the **MENU** button to display a menu screen.
If the **SPECIAL MENU** is *not* displayed, press the **YELLOW** button.

AUTO SUBTITLE

This TV has a feature which allows you to set Teletext subtitles (when available) to appear all the time, never, or only when the TV volume is muted. You can set Auto Subtitles following the procedure below.

1. Highlight **AUTO SUBTITLE** using Δ or ∇ , if necessary.
 2. Use $\triangleleft$ or $\triangleleft -$ to select **ON**, **OFF** or **MUTE**.
- OFF** = No automatic subtitles,
MUTE = Automatic subtitles when volume is muted,
ON = Subtitles appear all the time they are available.
3. Exit the menu system by pressing the **YELLOW** button.

STANDARD M1

When this is switched **ON** picture adjustments will return to factory pre-set levels when you switch off the TV. When switched **OFF** any adjustments made to the picture settings will be remembered even when the TV is switched off.

1. Highlight **STANDARD M1** using Δ or ∇ .
2. Switch **OFF** or **ON** using $\triangleleft$ or $\triangleleft -$.

FORMAT

This switches the picture size for the correct display of normal (4x3) pictures or wide screen (16x9) pictures. If you are watching a 16x9 video in a suitable VCR the picture has to be squashed to return it to the correct "letter-box" shape otherwise objects on the screen will look too tall and thin.

The usual setting is **4x3**, but you can manually select **AUTO** or **16x9** if you like.
(Automatic only works with the AV input).

1. Highlight **FORMAT** using Δ or ∇ .
2. Switch to **AUTO**, **4x3** or **16x9** using $\triangleleft$ or $\triangleleft -$.

SPECIAL MENU
AUTO SUBTITLE OFF
FORMAT AUTO
STANDARD M1 OFF
PICTURE SOUND EXIT SETUP

SPECIAL MENU
AUTO SUBTITLE MUTE
FORMAT AUTO
STANDARD M1 OFF
PICTURE SOUND EXIT SETUP

SPECIAL MENU
AUTO SUBTITLE MUTE
FORMAT AUTO
STANDARD M1 ON
PICTURE SOUND EXIT SETUP

SPECIAL MENU
AUTO SUBTITLE MUTE
FORMAT AUTO
STANDARD M1 ON
PICTURE SOUND EXIT SETUP

SET-UP MENU

Press the **MENU** button to display a menu screen. If the **SET-UP** menu is not displayed, press the **BLUE** button.

AV2 DUBBING

The TV can route signals from AV1, AV3 or the internal satellite system while in standby. This allows overnight video recording of satellite programmes (for example) without having to leave the TV fully switched on.

Note that before you can route satellite signals to AV2 you *must* program the **SAT EVENT TIMER**. This provides power to the satellite module during standby mode.
See "SAT EVENT TIMER" on page 22 for details.

This control will not work if an external decoder has been connected to the AV2 SCART socket.

See "USING AN EXTERNAL DECODER" on page 24 for details.

NB When AV2 DUBBING is switched **ON** the Power-on / Standby lamp will turn amber when the TV is in standby mode.

1. Highlight "AV2 DUBBING" with the Δ or ∇ buttons.
2. Select **ON** or **OFF** with the $\triangleleft$ or $\triangleleft -$ buttons.

See "AV CONNECTIONS" on page 30 for details of connecting a VCR or etc to your Television via the AV sockets.

AV2 OUTPUT

The output of the AV2 connector can be selected to be the same as the TV signal (the current TV channel), the current satellite channel, or the AV1 or AV3 input signal.

This control is not available if an external decoder has been connected to the AV2 SCART socket.

See "EXTERNAL DECODER" on page 24 for details.

1. Highlight "AV2 OUTPUT" with the Δ or ∇ buttons.
2. Select **TV**, **AV1**, **SAT**, or **AV3** with the $\triangleleft$ or $\triangleleft -$ buttons.

NB The AV2 output is always a standard video signal even when you have an S-video source, such as an S-VHS video recorder, connected to AV3.

SYSTEM

"AUTO" is the normal setting. However, in some cases you may want to select the colour system manually. This may be useful if you are receiving a weak station or when using some types of VCR with your TV.

1. Highlight **SYSTEM** using Δ or ∇ .
2. Switch to **AUTO**, **PAL**, **60PAL**, **SECAM**, **NTSC 358** or **NTSC 443** with the $\triangleleft$ or $\triangleleft -$ buttons.

NB Note that the NTSC colour system only functions in AV mode.

SET-UP MENU
SYSTEM SECAM
AV2 OUTPUT AV1
AV2 DUBBING OFF

SET-UP MENU
SYSTEM SECAM
AV2 OUTPUT AV1
AV2 DUBBING OFF

NICAM STEREO

To check for a Nicam broadcast, press the **I/II** button. The sound mode will also be displayed when you change channel or the Nicam broadcast mode changes.
The on-screen display will show how Nicam is being broadcast for the current channel:

NICAM STEREO = Nicam stereo
NICAM II = Nicam dual-sound (bilingual)
NICAM I = Nicam mono
NICAM OFF = Nicam available but switched off
NO DISPLAY = Nicam not being received

If Nicam is being received, you can switch between the available Nicam mode and Nicam off by pressing the **I/II** button.

NB Broadcasters will usually transmit mono programmes in stereo mode, i.e. the sound is actually mono but the on-screen display shows "NICAM STEREO".

DUAL SOUND (BILINGUAL) RECEPTION

During a dual-sound (bilingual) broadcast pressing the **I/II** button repeatedly selects the following options:

channel I on both speakers NICAM
channel II on both speakers NICAM
channel I on left speaker, II on right speaker NICAM
Nicam off NICAM OFF

DOLBY PRO LOGIC SURROUND

Dolby Surround Pro Logic gives realistic sound that literally surrounds you. It is effective when viewing programmes that are made with Dolby Surround soundtracks. Pre-recorded video tapes and laser disks can be easily identified by the DOLBY SURROUND printing on the package. TV programmes also show this type of indication in their credits.

In Dolby Surround Pro Logic, in addition to the TV's left and right internal speakers, there are external rear "Surround" speakers and a centre speaker. These speakers give the sound a three dimensional quality.

Manufactured under licence from Dolby Laboratories Licensing Corporation. DOLBY the double-D symbol and PRO LOGIC are trademarks of Dolby Laboratories Licensing Corporation.

1. CONNECT THE SURROUND AND CENTRE SPEAKERS

Before you connect your speakers, you should assemble the TV stand following the instructions supplied with the stand. You should also set the CENTRE MODE in the INSTALL MENU to **NORMAL**.

See "CENTRE MODE" on page 18 for details.

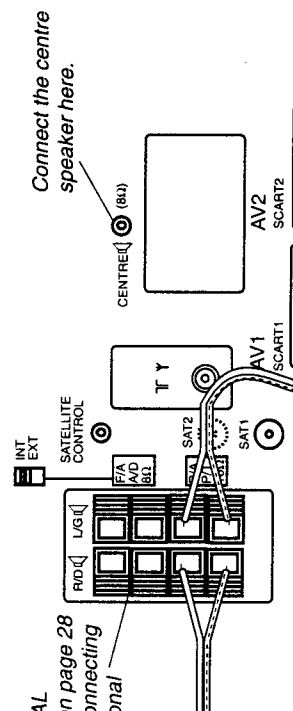
If you do not want to use the stand or connect the centre speaker to your TV you should set this control to **PHANTOM**. However, it is recommended that you connect the centre speaker as this is an important part of your speaker layout.

1. Prepare the speaker leads by removing the insulation on both ends, separating the wires and twisting the cores as shown.
2. On the back of the speakers you will find one red and one black connector. Push the tabs on the connectors and insert the speaker leads*.

3. On the back of the TV you will find 4 red and black connectors as shown. Push the tabs on the connectors and insert the surround speaker leads making sure that you use the connectors marked "R / A / P / T 16 Ω". Make sure that the '+' and '-' terminals on the TV are connected to the '+' and '-' terminals on the speakers by following the marking on the wire.

4. Insert the centre speaker pin connector into the socket marked **CENTRE**.

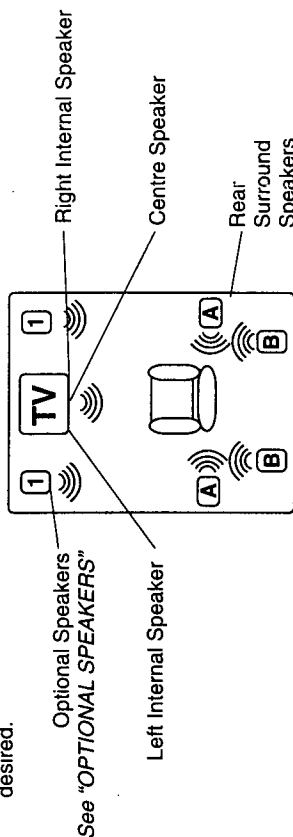
See "OPTIONAL SPEAKERS" on page 28 for details of connecting and using optional speakers.



2. SET UP THE LISTENING AREA

The rear surround speakers should be placed either facing forwards (B) or preferably inwards (A). It is best if they are a little above the level of your head.

The speakers have keyhole slots on the back so you can fix them to the wall if desired.



Position the speakers and decide on your optimum viewing position.

3. SWITCH ON THE TEST SIGNAL

Your TV produces a test signal which is used for balancing the volume level from the speakers.

1. Press the **MENU** button to display a menu screen.
2. If the **SOUND** menu is not displayed, press the **GREEN** button to display the **SOUND** menu.
3. Use Δ or ∇ to select **SURROUND** and switch to **PRO LOGIC** using Δ or ∇ .
4. Use Δ or ∇ to select **SPEAKER TEST** and switch **ON** using Δ or ∇ . A "pink noise" test signal will sound for two seconds on each speaker channel in turn. The sequence for the test signal is:

LEFT... CENTRE... RIGHT... REAR...
To hold the test signal on any sound channel, press the **HOLD** button. Press the **HOLD** button again to continue with the sequence.

SOUND MENU		M1	M2	AV	SAT
MEMORY					
BASS					
TREBLE					
BALANCE					
LOUDNESS					
HYPERSOUND					
SURROUND					
SURROUND LEVEL					
CENTRE LEVEL					
SURROUND DELAY					
SPEAKER TEST					

4. ADJUST THE SOUND CHANNELS

Adjust the sound channels so that the volume of each channel sounds the same when heard from your normal viewing position.

LEFT and RIGHT CHANNEL ADJUSTMENT

To adjust the left and right sound channels, use Δ or ∇ to select **BALANCE** and adjust using Δ or ∇ .

CENTRE CHANNEL ADJUSTMENT

To adjust the **CENTRE SPEAKER** sound channel, use Δ or ∇ to select **CENTRE LEVEL** and adjust using Δ or ∇ .

REAR CHANNEL ADJUSTMENT

To adjust the **REAR SURROUND** sound channel, use Δ or ∇ to select **SURROUND LEVEL** and adjust using Δ or ∇ .

5. ADJUST THE SURROUND DELAY

You can adjust the surround delay for different sizes of rooms, or for different layouts of your speakers. The surround delay is pre-set to 20mS but you can increase or decrease this as desired.

1. Press the **MENU** button to display a menu screen.

2. If the **SOUND** menu is not displayed, press the **GREEN** button.

3. Use Δ or ∇ to highlight **SURROUND** and select **PRO LOGIC** using Δ or ∇ .

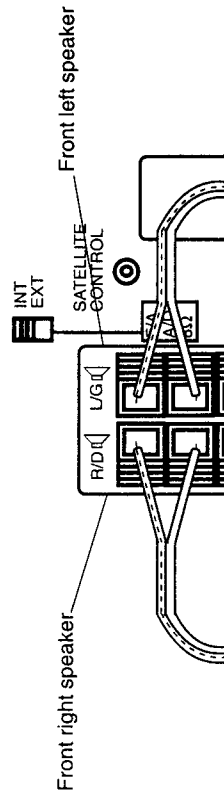
4. Use Δ or ∇ to highlight **SURROUND DELAY** and adjust using Δ or ∇ .

5. Press the **MENU** button to exit the **SOUND** menu.

SOUND MENU		M1	M2	AV	SAT
MEMORY					
BASS					
TREBLE					
BALANCE					
LOUDNESS					
HYPERSOUND					
SURROUND					
SURROUND LEVEL					
CENTRE LEVEL					
SURROUND DELAY					
SPEAKER TEST					

OPTIONAL SPEAKERS

Normally, the speakers in the TV carry the left and right sound channels. However, it is possible to connect a pair of external speakers to your TV to carry these channels. A switch at the back of your TV switches between internal (INT) or external speakers (EXT). These should be 8 ohm speakers rated at 10w R.M.S or greater.



TELETEXT

BASIC OPERATION

With the TV switched on, press the **TEXT** button to turn Teletext on, an index page is displayed. The top line will look something like this:

P100 CEEFAX 100 Fri 15 Mar 12:54 19

Choose a subject and input the page number of the subject by pressing the number buttons on the remote control unit. As you press the buttons the numbers will appear at the top left hand corner of the TV screen.

To see an index page simply press the **INDEX** button.

At the bottom of the page there are 4 coloured page titles (usually these are subject areas) to see one of these—press the matching **COLOUR** button.

To superimpose the Teletext page on the TV picture (MIX mode), press the **MIX** button.

To stop using Teletext and return to watching TV—press the **TV/AV** button.

OTHER FUNCTIONS

△ ▽

These buttons can be used to select the next page number up or down—but note that the next page number may not exist.

SIZE

Pressing the **SIZE** button repeatedly enlarges the top half of the page, then the bottom half and then returns the page to normal.

HOLD

Some Teletext pages contain several "sub-pages" which are displayed one after another. If you want to stop the sub-pages changing—press the **HOLD** button. The symbol  will appear at the top left of the page. To cancel this function press the **HOLD** button again or select another page.

REVEAL (REVL)

Pressing the **REVL** button will display hidden text, for example, on a quiz page with concealed answers. Press the button again to hide the text.

CANCEL CANCEL/TIME

Pressing the **CANCEL/TIME** button restores the television picture but leaves the Teletext system switched on. You can choose new pages without interrupting a television programme. Press again to restore Teletext.

The page number will be displayed when a page is received for the first time, or when a page is updated.

TIME CANCEL/TIME

Press the **CANCEL/TIME** button to see a digital clock on the screen when Teletext is switched off. The clock will disappear after a few seconds. Teletext must be available for this to work.

ADVANCED TEXT OPERATION (LIST MODE)

The Teletext system in this TV has an Advanced Text feature which allows you to memorise a list of 4 page numbers which can be different for each of the first 30 programme positions, i.e. programmes 0–29. Programme numbers higher than this share the list for programme 29.

1. Press the **MODE** button to select teletext "list" mode. The letter "L" and four coloured page numbers will appear at the bottom of the screen, E.g.:

L	100	888	255	255
	red	green	yellow	blue

2. To see one of these pages—press the matching **COLOUR** button.
3. To change the numbers to your own preferred pages:

- a. Press a colour button.
 - b. Enter a page number (press 3 number buttons, for example).
 - c. Repeat this with the other colour buttons and with other page numbers if you like.
 - d. Store these new page numbers so that they are automatically displayed each time list mode is selected. Press the **STORE** button and hold it until the coloured numbers turn white. If the new page numbers are not stored then the old page numbers will return next time you select list mode.
4. To turn off list mode press the **MODE** button again.

OFF TIMER

The off-timer can be programmed to automatically switch the television to standby after a period of up to 90 minutes.

SETTING THE TIMER

1. Press the **OFF-TIMER** button, the screen shows:  00.
2. Press the button again to make the display count down in ten minute steps until you see the time you want.
3. Wait until the display disappears. The timer is now set.

TO CANCEL THE TIMER

Press the **OFF-TIMER** button then press again until the display shows zero. Alternatively, press the standby button twice.

TO CHECK THE REMAINING TIME

When the display is not on the screen, press the button once.
NB For the last 10 minutes the display will appear *briefly* in RED every minute. For the last minute the display is continuous until the TV switches off.

AERIAL

The aerial socket at the back of the TV is a standard 75 ohm coaxial aerial socket. Connect your aerial in the usual way.

SATELLITE LNB

Connect your satellite dish to this socket.

EXTERNAL SPEAKERS

See "DOLBY PRO LOGIC SURROUND" starting on page 27 for details of connecting external speakers to your TV.

AV1 SCART SOCKET

Inputs: Audio, normal (composite) video and RGB.

Normally an RGB source will switch the TV to RGB input automatically. If not, you can select "(RGB)AV1" with the **RED** button.

Outputs: Audio and normal video. The output is always the same as the signal received through the aerial socket (the "TV signal") even when you are watching an AV input.

AV2 SCART SOCKET

Inputs: Audio and normal (composite) video.

Outputs: Audio and normal video. This output can be switched to provide either the TV signal, satellite signal, or the AV1 or AV3 input signal.

NB The output is normal video only, an S-video input is converted to normal video and an RGB signal cannot be output at all.

See "AV2 OUTPUT" on page 26 for details of how to set the output.

AV3 INPUT

This input is behind the door on the front of your TV. There are four sockets: 1) an S-video socket for connecting a super-VHS VCR or similar; 2) two audio inputs—stereo left and right; and 3) a standard (or "composite") video socket (RCA phono type) for a conventional VCR.

NOTE: if you try to connect both the S-video socket and the standard socket at the same time, the TV will use the signal from the S-video input in preference to the standard input.

Note that if the audio output of your external video equipment is mono, make sure that you connect the audio plug to the "(MONO)" socket so that the signal is automatically sent to both the left and right TV speakers.

SATELLITE CONTROL

Some Mitsubishi VCRs have a feature which allows them to change satellite channels automatically for recording different channels at different times. If your VCR has this feature, you will need to key the BRAND CODE "01" into your VCR to set the correct satellite type.

If your VCR has this control, it will be able to activate the "event timer" of your TV automatically when recording a satellite channel.

See your VCR instructions for details of using this feature.

You will need a link lead to connect your VCR to your TV. This lead is available from your dealer and you should ask for "SATELLITE LEAD" part number 999D159010.

STANDBY DUBBING

The TV can route signals from AV1, AV3 or the internal satellite system to AV2 while in standby. This allows overnight video recording of satellite programmes (for example) without having to leave the TV switched on.

See "SET-UP MENU" on page 26 for details of setting up and using this feature.

CHOOSING AN AV INPUT

You can select an AV input by pressing the **TV/AV** button on the remote control, or by pressing the **RED**, **GREEN** or **YELLOW** button. The on-screen display shows what you have selected: **AV1**, **AV2** or **AV3**.

1. Press the **RED** button to select **AV1**, the **GREEN** button to select **AV2** or the **YELLOW** button to select **AV3**.
2. Press the same colour button again to change the input as shown:

RED BUTTON:	AV1	↔	RGB-AV1
GREEN BUTTON:	AV2	↔	S-AV2
YELLOW BUTTON:	AV3	(does not change)	

If you have connected S-Video equipment to the AV3 input the on-screen display will show "S-AV3" instead of "AV3".

Pressing any **NUMBER** button will directly select TV mode from AV mode.

FORCED TV MODE

If you have connected equipment to the AV1 or AV2 SCART socket with a SCART to SCART connecting lead, you can usually expect the equipment to force the TV into AV mode automatically as soon as the equipment is set to play. In this case the on-screen display shows "AV1" or "AV2" in red.

To select a TV channel while the TV is forced into AV mode press the **TV/AV** button, the **PREVIOUS** button or any **NUMBER** button to select "forced TV"—shown by the channel display turning blue.

Press the **TV/AV** button to return to AV mode.

6 PARTS LIST

6.1 NOTES

6.1.1 Model-specific parts

As this service manual covers more than one model, the Service Parts List indicates where certain parts are model-specific:

- **25** = all three 25" models, **28** = all three 28" models,
- **BD**, **BDS** and **LD** refer to those models irrespective of CRT size,
- single models are indicated like this (for example); **25BD** = 25AV1BD.

If there is no such indication then the parts are common to *all* models covered by this manual.

6.1.2 Ordering

In order to expedite delivery of replacement parts, please specify:

1. Model number and Serial number
2. Part Number and Description
3. Quantity

Unless full information is provided a delay in execution of the order may result.

6.1.3 Safety

Safety Critical components are indicated thus: $\triangle$ and must only be replaced with original Mitsubishi parts.

6.1.4 Component tolerances

Component value tolerances are coded as shown in table 3.1A below.

B	C	D	F	G	J	K	M	N	V	X	Z	P	Q
± 0.1	± 0.025	± 0.5	± 1	± 2	± 5	± 10	± 20	± 30	+10 -10	+40 -20	+80 -20	+100 -0	+30 -10

table 3.1A Component tolerances

.2 SERVICE PARTS LIST**CRTs**

△	255P807010	CRT	A66EGW83X101	28
△	255P914030	CRT	A59EAK71X11	25

ICs

IC100	SAT	270P315010	IC SAT	STV0030	BDS
IC101	MAIN	270P341040	IC	TDA4472-B	
IC101	SAT	263P053060	IC	4053BP	BDS
IC102	SAT	263P053060	IC	4053BP	BDS
IC104	SAT	270P355030	IC	MC7812CT	BDS
IC105	SAT	274P681090	IC-C-MOS	ST9291J50A/A90	BDS
IC106	SAT	274P747010	IC-C-MOS	16K E ² PROM	BDS
IC108	SAT	270P316010	IC REG (Includes insulator)	LM317T	BDS
IC109	SAT	270P355010	IC	MC7805CT	BDS
IC201	MAIN	270P254010	IC	MC44031	
IC202	MAIN	270P263010	IC	TEA6415C	
IC301	DOLBY	270P209010	IC	MSP3410	
IC351	MAIN	270P259010	IC	TDA7263	
IC3A2	AUD-PWR	270P259010	IC	TDA7263	
IC3B1	AUD-PWR	270P259010	IC	TDA7263	28
IC3D1	DOLBY	274P682010	IC	DSP56004FJ52	
IC3D2	DOLBY	274P683010	IC-SRAM-32K8	MCM6206DP25	
IC3D3	DOLBY	274P685010	IC-CMOS-MICRO	MC68HC705C8	
IC3D4	DOLBY	272P966020	IC	TDA1543	
IC3D5	DOLBY	270P269010	IC	MCT4558CPI	
IC3D6	DOLBY	270P269010	IC	MCT4558CPI	
IC3D7	DOLBY	263P066060	IC	HEF 4066 BP	
IC3D8	DOLBY	267P036030	IC FILTER 15KHz	AFL87F15000E1	
IC3D9	DOLBY	270P355030	IC	MC7812CT	
IC401	MAIN	270P261010	IC	TDA8171	
IC551	MAIN	272P406010	IC	TEA 2031A	
IC660	CRT	270P207010	IC-CRT-OUTPUT	TEA5101	
IC701	MAIN	274P681080	IC	ST9291N6B1OB/A80	
IC702	MAIN	274P686010	IC	ST24C08	
IC7701	TEXT	274P571030	IC	SAA5281ZP/E	
IC7702	TEXT	274P570020	IC	PCB83C654P	
IC7703	TEXT	274P171010	IC	ST24C02AB1	
IC901	MAIN	272P514010	IC	TEA 2261	
IC951	MAIN	270P260010	IC	TDA8137	

TRANSISTORS

Q102	MAIN	260P748030	TRANSISTOR	JC501-R	
Q102	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q103	MAIN	260P748030	TRANSISTOR	JC501-R	LD
Q103	SAT	260P749030	TRANSISTOR	JA101-Q	BDS
Q104	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q105	MAIN	260P748030	TRANSISTOR	JC501-R	
Q105	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q106	MAIN	260P749030	TRANSISTOR	JA101-Q	LD

SYMBOL	No PCB	PART No	PART NAME	DESCRIPTION	MODELS
Q106	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q107	MAIN	260P749030	TRANSISTOR	JA101-Q	LD
Q107	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q108	MAIN	260P749030	TRANSISTOR	JA101-Q	LD
Q108	SAT	260P749030	TRANSISTOR	JA101-Q	BDS
Q112	SAT	260P749030	TRANSISTOR	JA101-Q	BDS
Q113	SAT	260P749030	TRANSISTOR	JA101-Q	BDS
Q114	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q115	SAT	260P749030	TRANSISTOR	JA101-Q	BDS
Q116	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q117	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q118	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q119	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q120	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q121	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q122	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q123	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q124	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q125	SAT	260P545010	TRANSISTOR	BC327	BDS
Q126	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q127	SAT	260P545010	TRANSISTOR	BC327	BDS
Q128	SAT	260P545010	TRANSISTOR	BC327	BDS
Q129	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q130	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q131	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q132	SAT	260P749030	TRANSISTOR	JA101-Q	BDS
Q135	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q136	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q137	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q138	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q139	SAT	260P748030	TRANSISTOR	JC501-R	BDS
Q251	MAIN	260P748030	TRANSISTOR	JC501-R	
Q252	MAIN	260P748030	TRANSISTOR	JC501-R	
Q253	MAIN	260P748030	TRANSISTOR	JC501-R	
Q256	MAIN	260P748030	TRANSISTOR	JC501-R	
Q301	MAIN	260C604020	TRANSISTOR	DTC124ES	
Q302	MAIN	260C604020	TRANSISTOR	DTC124ES	
Q302	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q303	MAIN	260P748030	TRANSISTOR	JC501-R	
Q304	MAIN	260P748030	TRANSISTOR	JC501-R	
Q304	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q305	MAIN	260P749050	TRANSISTOR	JA101-Q,R	
Q306	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q307	DOLBY	260P749030	TRANSISTOR	JA101-Q	
Q308	DOLBY	260P749030	TRANSISTOR	JA101-Q	
Q3A05	AUD-PWR	260C604020	TRANSISTOR	DTC124ES	
Q3A06	AUD-PWR	260C604020	TRANSISTOR	DTC124ES	
Q3A07	AUD-PWR	260C604020	TRANSISTOR	DTC124ES	28
Q3D1	DOLBY	260P748030	TRANSISTOR	JC501-R	

SYMBOL No PCB		PART No	PART NAME	DESCRIPTION	MODELS
Q3D2	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q3D3	DOLBY	260P356010	TRANSISTOR	2SC1906	
Q3D5	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q3D6	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q3D7	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q3D8	DOLBY	260P748030	TRANSISTOR	JC501-R	
Q450	MAIN	260P748030	TRANSISTOR	JC501-R	
Q451	MAIN	260P387010	TRANSISTOR	2SC2236-O,Y	
Q501	MAIN	260P748030	TRANSISTOR	JC501-R	
Q551	MAIN	260P422010	TRANSISTOR	2SC2482	
Q552	MAIN	261P007010	TRANSISTOR	S2055N	
Q6A1	CRT	260P749030	TRANSISTOR	JA101-Q	28
Q6A2	CRT	260P748030	TRANSISTOR	JC501-R	28
Q6A3	CRT	260P574020	TRANSISTOR	2SD1264A-P	28
Q6A4	CRT	260P573020	TRANSISTOR	2SB940A-P	28
Q6A5	CRT	260P748030	TRANSISTOR	JC501-R	28
Q6A7	CRT	260P748030	TRANSISTOR	JC501-R	28
Q6A8	CRT	260P748030	TRANSISTOR	JC501-R	28
Q6A9	CRT	260P748030	TRANSISTOR	JC501-R	28
Q6E2	CRT	260P748030	TRANSISTOR	JC501-R	
Q6E3	CRT	260P748030	TRANSISTOR	JC501-R	
Q6E4	CRT	260P748030	TRANSISTOR	JC501-R	
Q6E5	CRT	260P748030	TRANSISTOR	JC501-R	
Q6E7	CRT	260P748030	TRANSISTOR	JC501-R	
Q6E8	CRT	260C255040	TRANSISTOR	2SA950-Y FORMED	
Q701	MAIN	260C559050	TRANSISTOR	2SC1740S-E FORMED	
Q702	MAIN	260P748030	TRANSISTOR	JC501-R	
Q703	MAIN	260P749030	TRANSISTOR	JA101-Q	
Q704	MAIN	260P748030	TRANSISTOR	JC501-R	
Q705	MAIN	260P749030	TRANSISTOR	JA101-Q	
Q706	MAIN	260P749030	TRANSISTOR	JA101-Q	
Q707	MAIN	260P748030	TRANSISTOR	JC501-R	
Q708	MAIN	260P748030	TRANSISTOR	JC501-R	
Q710	MAIN	260P748030	TRANSISTOR	JC501-R	
Q711	MAIN	260P748030	TRANSISTOR	JC501-R	
Q713	MAIN	260P748020	TRANSISTOR	JC501-Q,R	
Q714	MAIN	260P748030	TRANSISTOR	JC501-R	
Q715	MAIN	260P748030	TRANSISTOR	JC501-R	
Q716	MAIN	260P748030	TRANSISTOR	JC501-R	
Q901	MAIN	261P006010	TRANSISTOR	S2000N	
Q902	MAIN	260P748030	TRANSISTOR	JC501-R	
Q951	MAIN	260P748030	TRANSISTOR	JC501-R	
Q952	MAIN	260P387010	TRANSISTOR	2SC2236-O,Y	
DIODES					
D100	SAT	264P370010	DIODE	1N4148	BDS
D101	SAT	264P370010	DIODE	1N4148	BDS
D102	SAT	264P370010	DIODE	1N4148	BDS
D103	SAT	264P370010	DIODE	1N4148	BDS
D109	SAT	264P370010	DIODE	1N4148	BDS

SYMBOL	No PCB	PART No	PART NAME	DESCRIPTION	MODELS
D110	SAT	264P370010	DIODE	1N4148	BDS
D111	SAT	264P370010	DIODE	1N4148	BDS
D112	SAT	264P370010	DIODE	1N4148	BDS
D113	SAT	264P370010	DIODE	1N4148	BDS
D201	MAIN	264P370010	DIODE	1N4148	
D251	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D252	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D253	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D254	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D255	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D256	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D257	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D258	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D301	MAIN	264P370010	DIODE	1N4148	
D302	MAIN	264P370010	DIODE	1N4148	
D303	DOLBY	264P370010	DIODE	1N4148	
D304	DOLBY	264P370010	DIODE	1N4148	
D3D1	DOLBY	264P370010	DIODE	1N4148	
D3D2	DOLBY	264P370010	DIODE	1N4148	
D3D3	DOLBY	264P370010	DIODE	1N4148	
D401	MAIN	264P374020	DIODE	1N4003ID	
D501	MAIN	264P463020	DIODE	EQA02-08C/RD8.2EB2	
D502	MAIN	264P370010	DIODE	1N4148	
D503	MAIN	264P371010	DIODE	BYV95B	
D504	MAIN	264P371010	DIODE	BYV95B	
D505	MAIN	264P375020	DIODE	BY228	
D506	MAIN	264P378020	DIODE	BYW96E (FORMED)	
D507	MAIN	264P371010	DIODE	BYV95B	
D508	MAIN	264P371010	DIODE	BYV95B	
D509	MAIN	264P371010	DIODE	BYV95B	
D514	MAIN	264P295010	DIODE	ES 1	25
D560	MAIN	264P370010	DIODE	1N4148	
D561	MAIN	264P493020	DIODE	RD39FB2	
D562	MAIN	264P370010	DIODE	1N4148	
D563	MAIN	264P370010	DIODE	1N4148	
D601	MAIN	264P370010	DIODE	1N4148	
D655	CRT	264P370010	DIODE	1N4148	
D656	CRT	264P370010	DIODE	1N4148	
D657	CRT	264P370010	DIODE	1N4148	
D6A1	CRT	264P370010	DIODE	1N4148	28
D6A2	CRT	264P374020	DIODE	1N4003ID	28
D6A3	CRT	264P374020	DIODE	1N4003ID	28
D6A4	CRT	264P370010	DIODE	1N4148	28
D6A7	CRT	264P372010	DIODE	BYV96E	25
D701	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D702	MAIN	264P460020	DIODE	EQA02-05CD/RD5.1EB1	
D703	MAIN	264P461070	DIODE	EQA02-06D/RD6.2EB2	
D704	MAIN	264P370010	DIODE	1N4148	
D705	MAIN	264P370010	DIODE	1N4148	
D706	MAIN	264P465040	DIODE	EQA02-12AB/RD13EB1,B2	

SYMBOL	No PCB	PART No	PART NAME	DESCRIPTION	MODELS
D708	MAIN	264P370010	DIODE	1N4148	
D709	MAIN	264P370010	DIODE	1N4148	
D710	MAIN	264P370010	DIODE	1N4148	
D7701	TEXT	264P370010	DIODE	1N4148	
D791	LED	264P584020	DIODE LE	SML1216W-C,D	
D901	MAIN	264P376010	DIODE	BYW56	
D902	MAIN	264P376010	DIODE	BYW56	
D903	MAIN	264P376010	DIODE	BYW56	
D904	MAIN	264P376010	DIODE	BYW56	
D905	MAIN	264P371010	DIODE	BYV95B	
D906	MAIN	264P372010	DIODE	BYV96E	
D907	MAIN	264P481060	DIODE	RD3.0FB2	
D908	MAIN	264P370010	DIODE	1N4148	
D909	MAIN	264P481060	DIODE	RD3.0FB2	
D951	MAIN	264P378020	DIODE	BYW96E (FORMED)	
D952	MAIN	264P377020	DIODE	BYW95B (FORMED)	
D953	MAIN	264P377020	DIODE	BYW95B (FORMED)	
D955	MAIN	264P461080	DIODE	EQA02-06E/RD6.2EB3	
D956	MAIN	266P010020	IC-DIODE	μ PC574J-K	
D957	MAIN	264P463080	DIODE	EQA02-09C/RD9.1EB3	
D959	MAIN	264P377020	DIODE	BYW95B (FORMED)	
D968	MAIN	264P371010	DIODE	BYV95B	BDS
FILTERS					
CF101	MAIN	296P024040	CERAMIC-TRAP	TPS6.0MB	
SF101	MAIN	296P144010	SAW-FILTER	OFWK3950M	BD, BDS
SF101	MAIN	296P144020	SAW-FILTER	OFWK3953M	LD
SF301	MAIN	296P145010	SAW-FILTER	OFWK9350M	
COILS					
L100	SAT	325C095090	COIL-PEAKING	4.7 μ H-J	BDS
L101	MAIN	325C164070	COIL-PEAKING	0.47 μ H-K	
L101	SAT	325C095090	COIL-PEAKING	4.7 μ H-J	BDS
L102	MAIN	325C161010	COIL-PEAKING	6.8 μ H-K	
L103	MAIN	325C121030	COIL-PEAKING	10 μ H-K	
L103	SAT	325C120090	COIL-PEAKING	4.7 μ H-K	BDS
L104	MAIN	323P175040	COIL-VIF	VIF=38.9, 39.5	
L104	SAT	325C106060	COIL-PEAKING	18 μ H-J	BDS
L105	SAT	325C106040	COIL-PEAKING	12 μ H-J	BDS
L106	MAIN	325C121030	COIL-PEAKING	10 μ H-K	
L201	MAIN	321C031040	COIL-RF	10 μ H-K	
L202	MAIN	325C120090	COIL-PEAKING	4.7 μ H-K	
L301	DOLBY	325C120010	COIL-PEAKING	1 μ H-M	
L302	DOLBY	325C120010	COIL-PEAKING	1 μ H-M	
L303	DOLBY	325C120010	COIL-PEAKING	1 μ H-M	
L304	DOLBY	325C120070	COIL-PEAKING	3.3 μ H-K	28
L305	DOLBY	325C120070	COIL-PEAKING	3.3 μ H-K	28
L306	MAIN	325C120070	COIL-PEAKING	3.3 μ H-K	
L307	MAIN	325C120070	COIL-PEAKING	3.3 μ H-K	
L308	DOLBY	325C120070	COIL-PEAKING	3.3 μ H-K	

SYMBOL	No PCB	PART No	PART NAME	DESCRIPTION	MODELS
L308	MAIN	325C120070	COIL-PEAKING	3.3μH-K	
L309	DOLBY	325C120070	COIL-PEAKING	3.3μH-K	
L309	MAIN	325C120070	COIL-PEAKING	3.3μH-K	
L310	MAIN	325C120070	COIL-PEAKING	3.3μH-K	
L311	MAIN	325C120070	COIL-PEAKING	3.3μH-K	
L314	MAIN	325C120070	COIL-PEAKING	3.3μH-K	
L315	MAIN	325C120070	COIL-PEAKING	3.3μH-K	
L316	MAIN	325C120070	COIL-PEAKING	3.3μH-K	
L317	MAIN	325C120070	COIL-PEAKING	3.3μH-K	
L3B01	AUD-PWR	325C108070	COIL-PEAKING	1000μH-J	28
L3D1	DOLBY	325C120090	COIL-PEAKING	4.7μH-K	
L3D10	DOLBY	325C121030	COIL-PEAKING	10μH-K	
L3D11	DOLBY	325C121030	COIL-PEAKING	10μH-K	
L3D2	DOLBY	325C120090	COIL-PEAKING	4.7μH-K	
L3D3	DOLBY	325C120090	COIL-PEAKING	4.7μH-K	
L3D4	DOLBY	325C120090	COIL-PEAKING	4.7μH-K	
L3D5	DOLBY	325C120090	COIL-PEAKING	4.7μH-K	
L3D6	DOLBY	325C120090	COIL-PEAKING	4.7μH-K	
L3D7	DOLBY	325C120090	COIL-PEAKING	4.7μH-K	
L3D8	DOLBY	325C121030	COIL-PEAKING	10μH-K	
L3D9	DOLBY	325C121030	COIL-PEAKING	10μH-K	
L401	MAIN	411P001070	LEAD-FERRITE		
L501	MAIN	409P006080	COIL-FILTER	6800μH-J	
L502	MAIN	321C030010	COIL-RF	1μH-K	
L503	MAIN	411D009020	CORE-FERRITE		
L504	MAIN	409P749010	COIL-PCC-CHOKE	15μH	
L505	MAIN	409P748010	COIL-PCC	1μH	
L551	MAIN	333P012010	COIL-HORIZ-LIN		
L6A1	CRT	411P001070	LEAD-FERRITE		28
L6A2	CRT	325C121050	COIL-PEAKING	15μH-K	28
L6A3	CRT	325C121050	COIL-PEAKING	15μH-K	28
L6A4	CRT	325C121050	COIL-PEAKING	15μH-K	28
L6A5	CRT	325C101040	COIL-PEAKING	12μH-K	28
L701	MAIN	325C121070	COIL-PEAKING	22μH-K	
L702	MAIN	325C121070	COIL-PEAKING	22μH-K	
L7701	TEXT	325C120010	COIL-PEAKING	1μH-M	
L7702	TEXT	325C120070	COIL-PEAKING	3.3μH-K	
L901	MAIN	321C030050	COIL-RF	2.2μH-K	
L903	MAIN	411P001070	LEAD-FERRITE		
L905	MAIN	411P001070	LEAD-FERRITE		
L951	MAIN	325D059060	COIL-PEAKING	390μH-K	
L955	MAIN	321C031090	COIL-RF	33μH-K	BDS
L991	PWR-SUB	351P047020	LINE-FILTER		
L993	PWR-SUB	351P011020	LINE-FILTER		
△		409P564040	COIL-DEGAUSSING		25
△		409P564050	COIL-DEGAUSSING		28

SYMBOL	No PCB	PART No	PART NAME	DESCRIPTION	MODELS	
TRANSFORMERS						
△	T551	MAIN	334P243010	ASSY-TRANS-FLYBACK	28	
△	T551	MAIN	334P244010	ASSY-TRANS-FLYBACK	25	
	T552	MAIN	336P017010	TRANS-HORIZ-DRIVE		
△	T901	MAIN	350P663010	TRANS-POWER		
VARIABLE RESISTORS						
	VR101	MAIN	127C380080	VR-SEMIFIXED	1/5W B10K-M	
	VR951	MAIN	127C380090	VR-SEMIFIXED	1/5W B20K-M	
RESISTORS						
	R108	SAT	103P400090	R-M-CHIP	1/10W 47-J	BDS
	R109	SAT	103P400090	R-M-CHIP	1/10W 47-J	BDS
	R110	SAT	103P401030	R-M-CHIP	1/10W 100-J	BDS
	R111	SAT	103P404010	R-M-CHIP	1/10W 22K-J	BDS
	R112	SAT	103P403030	R-M-CHIP	1/10W 4.7K-J	BDS
	R113	SAT	103P404040	R-M-CHIP	1/10W 39K-J	BDS
	R114	SAT	103P404010	R-M-CHIP	1/10W 22K-J	BDS
	R115	SAT	103P404040	R-M-CHIP	1/10W 39K-J	BDS
	R116	SAT	103P403030	R-M-CHIP	1/10W 4.7K-J	BDS
	R117	SAT	103P404080	R-M-CHIP	1/10W 82K-J	BDS
	R118	SAT	103P405020	R-M-CHIP	1/10W 180K-J	BDS
	R119	SAT	103P402040	R-M-CHIP	1/10W 820-J	BDS
	R120	SAT	103P405020	R-M-CHIP	1/10W 180K-J	BDS
	R121	SAT	103P404080	R-M-CHIP	1/10W 82K-J	BDS
	R122	SAT	103P406000	R-M-CHIP	1/10W 820K-J	BDS
	R123	SAT	103P402040	R-M-CHIP	1/10W 820-J	BDS
	R126	SAT	103P406020	R-M-CHIP	1/10W 1.2M-J	BDS
	R127	SAT	103P404090	R-M-CHIP	1/10W 100K-J	BDS
	R128	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
	R129	SAT	103P404080	R-M-CHIP	1/10W 82K-J	BDS
	R130	SAT	103P403060	R-M-CHIP	1/10W 8.2K-J	BDS
	R131	SAT	103P404000	R-M-CHIP	1/10W 18K-J	BDS
	R132	SAT	103P404090	R-M-CHIP	1/10W 100K-J	BDS
	R133	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
	R134	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
	R135	SAT	103P406000	R-M-CHIP	1/10W 820K-J	BDS
	R136	SAT	103P402050	R-M-CHIP	1/10W 1K-J	BDS
	R137	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
	R138	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
	R139	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
	R140	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
	R142	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
	R143	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
	R144	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
	R145	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
	R146	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
	R147	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
	R148	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
	R149	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
	R150	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS

SYMBOL No PCB		PART No	PART NAME	DESCRIPTION	MODELS
R151	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R152	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R153	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R154	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R155	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R156	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R157	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R158	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R159	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R160	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R161	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R162	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R163	SAT	103P404050	R-M-CHIP	1/10W 47K-J	BDS
R164	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R165	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R166	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R167	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R168	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R169	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R170	SAT	103P401000	R-M-CHIP	1/10W 56-J	BDS
R171	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R180	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R181	SAT	103P403030	R-M-CHIP	1/10W 4.7K-J	BDS
R183	SAT	103P402040	R-M-CHIP	1/10W 820-J	BDS
R184	SAT	MELX048010	R-M-CHIP	1/10W 6.2K-J	BDS
R185	SAT	103P403080	R-M-CHIP	1/10W 12K-J	BDS
R186	SAT	103P402020	R-M-CHIP	1/10W 560-J	BDS
R187	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R188	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R189	SAT	103P402040	R-M-CHIP	1/10W 820-J	BDS
R190	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R191	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R192	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R193	SAT	103P402050	R-M-CHIP	1/10W 1K-J	BDS
R194	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R195	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R196	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R197	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R199	SAT	103P401030	R-M-CHIP	1/10W 100-J	BDS
R200	SAT	103P401030	R-M-CHIP	1/10W 100-J	BDS
R201	SAT	103P401030	R-M-CHIP	1/10W 100-J	BDS
R203	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R204	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R206	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R207	SAT	103P403000	R-M-CHIP	1/10W 2.7K-J	BDS
R208	SAT	103P403000	R-M-CHIP	1/10W 2.7K-J	BDS
R209	SAT	103P409050	R-M-CHIP	1/10W 0 OHM	BDS
R210	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R211	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R212	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS

SYMBOL No PCB		PART No	PART NAME	DESCRIPTION	MODELS
R213	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R214	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R215	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R216	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R217	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R218	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R219	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R220	SAT	103P404020	R-M-CHIP	1/10W 27K-J	BDS
R221	SAT	103P403050	R-M-CHIP	1/10W 6.8K-J	BDS
R222	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R223	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R224	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R225	SAT	103P402000	R-M-CHIP	1/10W 390-J	BDS
R226	SAT	103P402010	R-M-CHIP	1/10W 470-J	BDS
R227	SAT	103P404040	R-M-CHIP	1/10W 39K-J	BDS
R228	SAT	103P404020	R-M-CHIP	1/10W 27K-J	BDS
R229	SAT	103P403030	R-M-CHIP	1/10W 4.7K-J	BDS
R230	SAT	103P901090	R-METAL	0.4W 560-F	BDS
R231	SAT	103P902040	R-METAL	0.4W 910-F	BDS
R232	SAT	MELX049010	R-METAL	1/4W 1.4K-F	BDS
R233	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R234	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R235	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R236	SAT	103P900090	R-METAL	0.4W 220-F	BDS
R239	SAT	103P402050	R-M-CHIP	1/10W 1K-J	BDS
R240	SAT	103P404010	R-M-CHIP	1/10W 22K-J	BDS
R241	SAT	103P403090	R-M-CHIP	1/10W 15K-J	BDS
R242	SAT	103P403090	R-M-CHIP	1/10W 15K-J	BDS
R245	SAT	103P402050	R-M-CHIP	1/10W 1K-J	BDS
R246	SAT	103P404010	R-M-CHIP	1/10W 22K-J	BDS
R247	SAT	103P404010	R-M-CHIP	1/10W 22K-J	BDS
R248	SAT	103P404010	R-M-CHIP	1/10W 22K-J	BDS
R249	SAT	103P404090	R-M-CHIP	1/10W 100K-J	BDS
R250	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R251	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R252	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R253	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R260	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R261	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R262	SAT	103P401090	R-M-CHIP	1/10W 330-J	BDS
R263	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R264	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R265	SAT	103P401070	R-M-CHIP	1/10W 220-J	BDS
R266	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS
R267	SAT	103P401030	R-M-CHIP	1/10W 100-J	BDS
R268	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R270	SAT	103P402060	R-M-CHIP	1/10W 1.2K-J	BDS
R271	SAT	103P402090	R-M-CHIP	1/10W 2.2K-J	BDS
R272	SAT	103P404000	R-M-CHIP	1/10W 18K-J	BDS
R273	SAT	103P403070	R-M-CHIP	1/10W 10K-J	BDS

SYMBOL	No	PCB	PART No	PART NAME	DESCRIPTION	MODELS
	R352	MAIN	103P378060	R-FUSE	1/4W 3.3-J	
	R353	MAIN	103P378060	R-FUSE	1/4W 3.3-J	
△	R3A11	AUD-PWR	103P378060	R-FUSE	1/4W 3.3-J	
△	R3A12	AUD-PWR	103P378060	R-FUSE	1/4W 3.3-J	
△	R3B01	AUD-PWR	103P378060	R-FUSE	1/4W 3.3-J	28
△	R3B02	AUD-PWR	103P378060	R-FUSE	1/4W 3.3-J	28
	R3D64	DOLBY	103P544000	R-NETWORK	1/8W 18K-J x4	
	R406	MAIN	103P397090	R-FUSE	1/2W 0.82-J	25
	R508	MAIN	102P243050	R-CEMENT-METAL-SUS	5W 6.8K-K/J	
	R511	MAIN	102P229010	R-CEMENT-WIRE-SUS	10W 8.2-K/J	
△	R512	MAIN	103P442020	R-FUSE-METAL	1W 560-K-OR-J	
△	R513	MAIN	103P398040	R-FUSE	1/2W 2.2-J	
△	R514	MAIN	103P397090	R-FUSE	1/2W 0.82-J	
△	R516	MAIN	103P397090	R-FUSE	1/2W 0.82-J	
△	R671	CRT	103P447080	R-FUSE-METAL	1W 0.68-K-OR-J	28
△	R671	CRT	103P448040	R-FUSE-METAL	1W 2.2-K-OR-J	25
△	R6B1	CRT	103P370010	R-FUSE	1/4W 10-J	28
△	R6B4	CRT	103P392050	R-FUSE	1/2W 1.0K-J	28
△	R6B6	CRT	103P370050	R-FUSE	1/4W 22-J	28
△	R6B7	CRT	103P370010	R-FUSE	1/4W 10-J	28
△	R6B8	CRT	103P392050	R-FUSE	1/2W 1.0K-J	28
	R921	MAIN	109D074010	R-CEMENT-METAL	5W 1.8K-K-OR-J	
△	R981	MAIN	109P913050	R-COMPOSITION	1/2W 6.8M-J	
△	R982	MAIN	109P913050	R-COMPOSITION	1/2W 6.8M-J	
	R991	PWR-SUB	102P087040	R-CEMENT-WIRE	10W 4.7-K	
CAPACITORS						
	C101	SAT	141P131050	C-CERAMIC-CHIP	CK50V 3300pF-K	BDS
	C102	SAT	141P131030	C-CERAMIC-CHIP	CK50V 2200pF-K	BDS
	C103	SAT	141P131050	C-CERAMIC-CHIP	CK50V 3300pF-K	BDS
	C105	SAT	141P131030	C-CERAMIC-CHIP	CK50V 2200pF-K	BDS
	C106	SAT	154P331090	C-CERAMIC-CHIP	CK50V 22pF-J	BDS
	C107	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
	C108	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
	C109	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
	C110	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
	C111	SAT	154P333010	C-CERAMIC-CHIP	CK50V 68pF-J	BDS
	C112	SAT	154P332050	C-CERAMIC-CHIP	CK50C 39pF-J	BDS
	C113	SAT	154P333010	C-CERAMIC-CHIP	CK50V 68pF-J	BDS
	C114	SAT	154P331090	C-CERAMIC-CHIP	CK50V 22pF-J	BDS
	C115	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
	C116	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
	C118	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
	C119	SAT	141P135080	C-CERAMIC-CHIP	25V 0.1μF-Z	BDS
	C121	SAT	141P137040	C-CERAMIC-CHIP	B50V 0.022μF-Z	BDS
	C122	SAT	154P335010	C-CERAMIC-CHIP	CK50V 470pF-J	BDS
	C123	SAT	141P137080	C-CERAMIC-CHIP	B50V 0.047μF-K	BDS
	C124	SAT	141P130010	C-CERAMIC-CHIP	CK50V 220pF-J	BDS
	C125	SAT	154P335010	C-CERAMIC-CHIP	CK50V 470pF-J	BDS
	C126	SAT	141P132010	C-CERAMIC-CHIP	B50V 0.01μF-K	BDS

SYMBOL No PCB		PART No	PART NAME	DESCRIPTION	MODELS
C127	SAT	154P331090	C-CERAMIC-CHIP	CK50V 22pF-J	BDS
C128	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C129	SAT	154P332070	C-CERAMIC-CHIP	CK50C 47pF-J	BDS
C131	SAT	141P135080	C-CERAMIC-CHIP	25V 0.1μF-Z	BDS
C132	SAT	141P135000	C-CERAMIC-CHIP	25V 0.22μF-Z	BDS
C147	SAT	154P333010	C-CERAMIC-CHIP	CK50C 68pF-J	BDS
C152	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C153	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C157	SAT	154P333010	C-CERAMIC-CHIP	CK50V 68pF-J	BDS
C158	SAT	154P333010	C-CERAMIC-CHIP	CK50V 68pF-J	BDS
C159	SAT	154P331030	C-CERAMIC-CHIP	CK50V 12pF-J	BDS
C160	SAT	154P333050	C-CERAMIC-CHIP	CK50V 100pF-J	BDS
C161	SAT	154P332070	C-CERAMIC-CHIP	CK50C 47pF-J	BDS
C163	SAT	154P332090	C-CERAMIC-CHIP	CK50V 56pF-J	BDS
C166	SAT	154P331010	C-CERAMIC-CHIP	CH50V 10pF-C	BDS
C167	SAT	154P333070	C-CERAMIC-CHIP	CK50V 120pF-J	BDS
C169	SAT	154P332070	C-CERAMIC-CHIP	CK50C 47pF-J	BDS
C170	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
C171	SAT	141P132010	C-CERAMIC-CHIP	B50V 0.01μF-K	BDS
C172	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C174	SAT	154P331090	C-CERAMIC-CHIP	CK50V 22pF-J	BDS
C175	SAT	154P331090	C-CERAMIC-CHIP	CK50V 22pF-J	BDS
C176	SAT	141P130010	C-CERAMIC-CHIP	CK50V 220pF-J	BDS
C177	SAT	141P131030	C-CERAMIC-CHIP	CK50V 2200pF-K	BDS
C179	SAT	154P334030	C-CERAMIC-CHIP	CK50V 220pF-J	BDS
C181	SAT	141P132010	C-CERAMIC-CHIP	B50V 0.01μF-K	BDS
C182	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
C193	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
C194	SAT	141P133080	C-CERAMIC-CHIP	CK50V 0.01μF-K	BDS
C195	SAT	141P130010	C-CERAMIC-CHIP	CK50V 220pF-J	BDS
C196	SAT	141P130030	C-CERAMIC-CHIP	CK50V 330pF-K	BDS
C197	SAT	154P331030	C-CERAMIC-CHIP	CK50V 12pF-J	BDS
C198	SAT	154P331030	C-CERAMIC-CHIP	CK50V 12pF-J	BDS
C199	SAT	141P131030	C-CERAMIC-CHIP	CK50V 2200pF-K	BDS
C241	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C242	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C244	SAT	141P139030	C-CERAMIC-CHIP	B25V 0.1μF-K	BDS
C509	MAIN	172P171060	C-M-PLASTIC-PP	1600V 0.018μF-J	
C5A3	MAIN	172P942040	C-M-PLASTIC-PP	2000V 9100pF-J	
C5B1	MAIN	172P941010	C-M-PLASTIC-PP	2000V 3300pF-J	28
C5B3	MAIN	172P941030	C-M-PLASTIC-PP	2000V 3300 pF-J	25
C904	MAIN	185D059040	C-ELECTROLYTIC	385V/400V, 150μF-M	
△ C981	MAIN	189P091010	C-CERAMIC-AC	AC400V E4700pF-M	
△ C991	PWR-SUB	189P117030	C-M-POLYESTER-AC	AC275V 0.22μF-μF	
SWITCHES					
S701	MAIN	432P066010	SW-KEY-BOARD		
S702	MAIN	432P066030	SW-KEY-BOARD		
S703	MAIN	432P066030	SW-KEY-BOARD		
S704	MAIN	432P066030	SW-KEY-BOARD		

SYMBOL	No PCB	PART No	PART NAME	DESCRIPTION	MODELS
	S705	MAIN	432P066030	SW-KEY-BOARD	
⚠	S991	PWR-SUB	432C048010	SW-PUSH	AC250V 5A/80A
	SWA01	AUD-PWR	431C065020	SW-SLIDE	4-2 DC30V 1A NO
MISCELLANEOUS					
	CR5M1	MAIN	149P008010	CR-MULTIPLE	470P 3.6M-K
⚠	F991	PWR-SUB	283D047040	FUSE	T2A
	J251	MAIN	452C080020	21 PIN-SCART	035-098-4505
	J252	MAIN	452C080020	21 PIN-SCART	035-098-4505
	J253	MAIN	449C090010	SOCKET-DIN-MINI	4P-SW-TSUKI
	J254	MAIN	440C269010	PI-JACK-BOARD	LPR6529-1400
	J353	BOLBY	MELP424010	SOCKET-DIN-SP	
	J3A01	AUD-PWR	440C237020	TERMINAL-SP-8P	
	J601	CRT	449C126010	CRT SOCKET	
⚠	PC951	MAIN	268P068010	PHOTO COUPLER	TCDT1124G
	RP991	PWR-SUB	265P071050	POSISTOR	PTH451C41BG180N
	SK100	SAT	451C129020	JACK-MICROPHONE	YKB21-5129
	SP391		940B630001	ASSY-SPEAKER-SYSTEM	WITH WOOFER
	SP391		940B630002	ASSY-SPEAKER-SYSTEM	
	SP392		940B630002	ASSY-SPEAKER-SYSTEM	
	TU100	SAT	295P432010	TUNER-SAT	BSFK77G21
	TU101	MAIN	295P430010	TUNER-TV	U1343/IEC
	TU101	MAIN	295P430020	TUNER-TV	UV1315/IEC
	X301	DOLBY	285P225010	QUARTZ-CRYSTAL	AT-51 18.432MHZ
	X3D1	DOLBY	MELX017010	QUARTZ-CRYSTAL	4MHZ
	X601	MAIN	285P142020	QUARTZ-CRYSTAL	17.734475MHZ
	X602	MAIN	285P143020	QUARTZ-CRYSTAL	14.31818MHZ
	X701	MAIN	285P139040	QUARTZ-CRYSTAL	12MHZ
	X7701	TEXT	285P157010	QUARTZ-CRYSTAL	27MHZ/SAA5246
	XT100	SAT	MELX017010	CRYSTAL	4MHz
	XT101	SAT	285P139040	QUARTZ-CRYSTAL	12MHz
⚠	Z552	MAIN	299P193010	PROTECTOR	2000
	Z701	LED	939P580020	IR-PHOTO-MODULE	TFMK 5330
⚠	Z951	MAIN	299P193010	PROTECTOR	2000
⚠	Z951	MAIN	299P193030	PROTECTOR	3150
⚠	Z952	MAIN	299P193070	PROTECTOR	5000
⚠	Z953	MAIN	299P193000	PROTECTOR	1600
⚠	Z968	MAIN	299P193000	PROTECTOR	1600
PCB ASSEMBLIES					
⚠			920A416001	ASSY-PWB-MAIN	28LD
⚠			920A416003	ASSY-PWB-MAIN	28BDS
⚠			920A416019	ASSY-PWB-MAIN	28BD
⚠			920A425001	ASSY-PWB-MAIN	25LD
⚠			920A425006	ASSY-PWB-MAIN	25BD
⚠			920A425013*	ASSY-PWB-MAIN	* see notes next page
⚠			H92D001005*	ASSY-PWB-MAIN	* see notes next page
⚠			930C899001	ASSY-PWB-VM/CRT	25BD, 25LD
⚠			930C899003	ASSY-PWB-VM/CRT	28BD, 28LD
⚠			930C899007	ASSY-PWB-VM/CRT	25BDS
* see notes next page					

SYMBOL No PCB	PART No	PART NAME	DESCRIPTION	MODELS
⚠	930C899008	ASSY-PWB-VM/CRT		28BDS
⚠	930C900001	ASSY-PWB-POWER-SUB		
⚠	930C901001	ASSY-PWB-LED		
⚠	930C902010	ASSY-PWB-V/CRYPT	* see notes next page	BDS
⚠	930C903020*	ASSY-PWB-SAT	* see notes next page	*25BDS
⚠	930C903040*	ASSY-PWB-SAT	* see notes next page	*BDS
⚠	930C904004	ASSY-PWB-AUDIO-PWR		28
⚠	930C904006	ASSY-PWB-AUDIO-PWR		25
⚠	930C909001	ASSY-PWB-TEXT		
⚠	930C911002	ASSY-PWB-DOLBY		25BD, 25LD
⚠	930C911006	ASSY-PWB-DOLBY		28BDS
⚠	930C911007	ASSY-PWB-DOLBY		28BD, 28LD
⚠	930C911014	ASSY-PWB-DOLBY		25BDS
MECHANICAL AND COSMETIC				
⚠	246C162010	AC-POWER CORD/UK-PLUG		
	669D212040	SCREW 3x10 black	sp conns. / back cover fixing	
	669D218070	SCREW 5x30 sems	CRT fixing	
	669D220030	SCREW 3x10		
	669D221040	SCREW 4x12		
	669D221060	SCREW 4x16	back cover fixing	
⚠	700C600080	ASSY-BACK-COVER		25BD
⚠	700C600090	ASSY-BACK-COVER		25BDS
⚠	700C601020	ASSY-BACK-COVER		25LD
⚠	700C604050	ASSY-BACK-COVER		28BD
⚠	700C604060	ASSY-BACK-COVER		28BDS
⚠	700C604080	ASSY-BACKCOVER		28LD
	701D602080	ASSY-CABINET		25BD
	701D602090	ASSY-CABINET		25BDS
	701D604020	ASSY-CABINET		25LD
	701D605080	ASSY-CABINET		28BD
	701D605090	ASSY-CABINET		28BDS
	701D607020	ASSY-CABINET		28LD
	752C600090	ASSY-DOOR-SAT		25BD/LD
	752C601000	ASSY-DOOR-SAT		25BDS
	752C602000	ASSY-DOOR-SAT		28LD
	752C602030	ASSY-DOOR-SAT		28BDS
	752C602090	ASSY-DOOR-SAT		28BD
	752C603000	ASSY-DOOR-CONTROL		25
	752C603030	ASSY-DOOR-CONTROL		28
	754C600030	ASSY BUTTON POWER		25
	754C600050	ASSY-BUTTON POWER		28
	761C573010	DOOR-CATCH	for openable doors	
	761C550010	DOOR-CLIP	for fixed (Card reader) door	BD, LD
	244D279010	SPEAKER CABLE (PAIR)	for rear surround speakers	
	290P054070	TRANS-REMOCON		
	801C280010	PACKING-CASE		28
	801C280020	PACKING-CASE		25
	803A400010	CUSHION-SET		28
	803A401010	CUSHION-SET		25

SYMBOL No PCB	PART No	PART NAME	DESCRIPTION	MODELS
	831D296030	PACKING-BAG		25
	831D296040	PACKING-BAG		28
	871C601030	SERVICE MANUAL		
	872C123020	IB-COLOUR		LD
	872C123040	IB-COLOUR		BDS
	872C124000	IB-COLOUR		BD
	770B217010	UNIT-DOLBY-STAND	INC. rear & centre speakers	28
	770B217020	UNIT-DOLBY-STAND	INC. rear & centre speakers	25
	770B217030	UNIT-DOLBY-STAND	WITHOUT speakers	28
	770B217040	UNIT-DOLBY-STAND	WITHOUT speakers	25
	926P035020	SPEAKER-SYSTEM	rear speaker (single)	
	H48P001010	SPEAKER-SYSTEM	centre speaker (in stand)	
	999D161010	SAT-LINK-LEAD		BDS

NOTES

For CT-25AV1BDS only you *must* order the correct part numbers for **Assy PCB Main** and **Assy PCB Satellite** depending on the Serial number:

Serial Number	Assy PCB Main	Assy PCB Satellite
000001 ~ 000500	H92D001005	930C903020
000501 ~ onwards	920A425013	930C903040

Do not order these 2 parts using the numbers listed on the card inside the TV.

VideoCrypt Decoder

The VideoCrypt decoder PBC is only serviceable by Mitsubishi service department.

In the event of a fault on this PCB, please follow this procedure:

1. Contact the Mitsubishi consumer spares department to request an advance replacement VideoCrypt decoder PCB.
2. Upon receipt of the replacement PCB, complete the enclosed form and return it with the faulty PCB, in the packaging provided.

Failure to return the PCB within 30 days will incur full replacement PCB costs.

NB

The plastic PCB frame, connecting lead and fixing screw should be retained as the replacement PCB is supplied *without* these items.

7 SCHEMATIC DIAGRAMS

7.1 SERVICING PRECAUTIONS

The Δ symbol indicates components with characteristics critical to safety and performance.

These parts **must** only be replaced with parts having identical values and characteristics – refer to the Service Parts List for the correct Mitsubishi part numbers.

Do not compromise the safety of the receiver by improper servicing.

7.2 GENERAL NOTES

- DC voltages are measured from the points indicated to circuit ground.
- Waveforms are for a PAL colour bar signal.
- Test Points are shown as: "TP6A", etc.
- This is a basic circuit diagram – receivers are subject to modification due to continuous engineering improvement.

7.3 COMPONENT INFORMATION

SPECIFIC SYMBOLS

	Zener diode
	Varicap
	Posistor
	Thermistor
	Fusible resistor
	Crystal
	Air gap
	Part (e.g. resistor) on copper side of PCB
	Ceramic filter

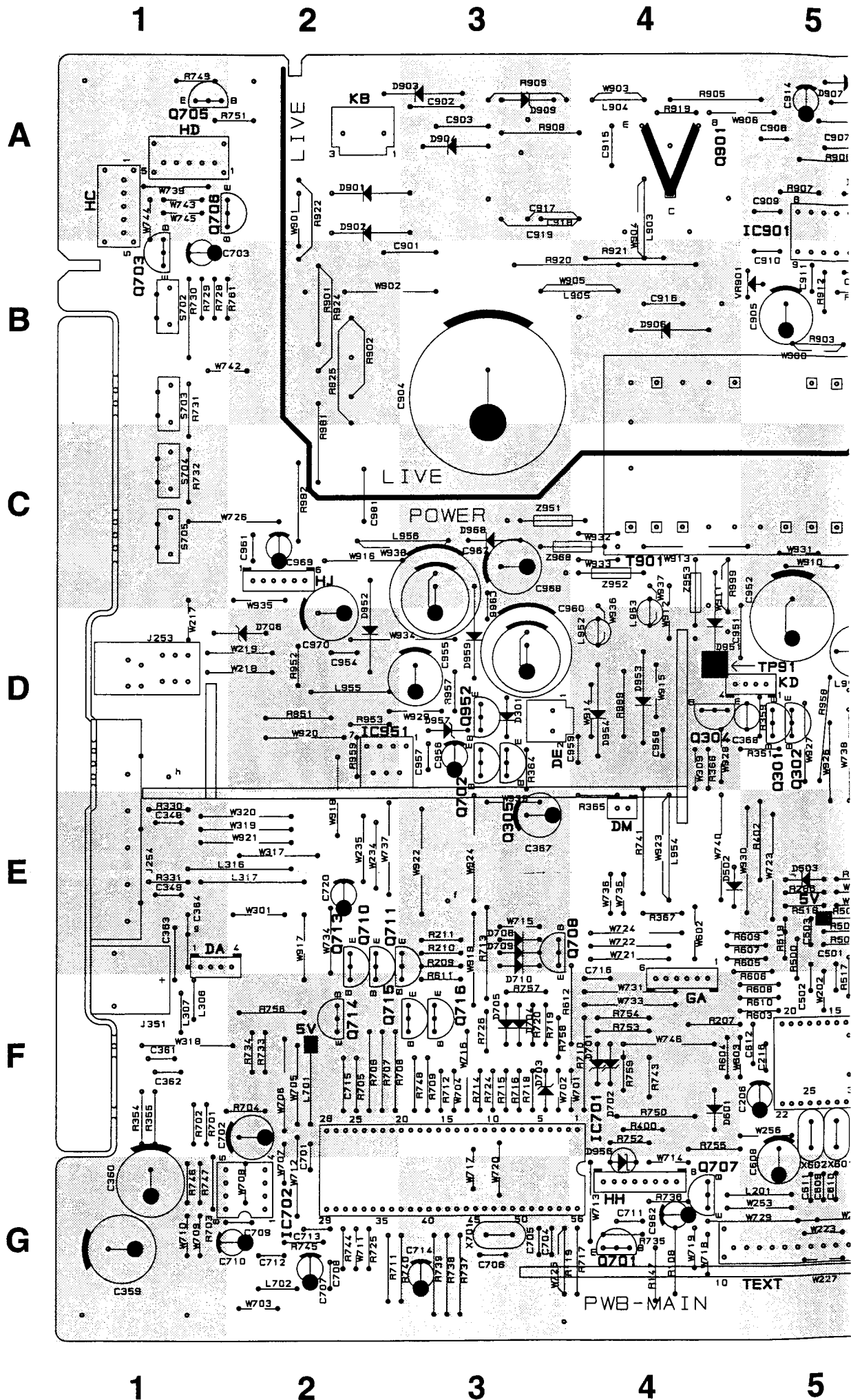
RESISTORS

Value	without spec.	Ω , K = K Ω , M = M Ω
Wattage	without spec.	1/4W or 1/6W (chips: 1/10W)
Tolerance	without spec.	$\pm 5\%$ D = $\pm 0.5\%$, F = $\pm 1\%$, J = $\pm 5\%$, K = $\pm 10\%$,
Type	without spec.	Carbon film (S) Composition (MB) Metal oxide film (CE) Cemented (W) Wire wound (M) Metal film (MPC) Metal plate cement (ML) Metal linear

CAPACITORS

Value	without spec.	pF for values >1, μ F for values <1
Voltage	without spec.	50V
Tolerance	without spec.	electrolytic: $\pm 20\%$, others $\pm 10\%$ G = $\pm 2\%$, J = $\pm 5\%$, K = $\pm 10\%$, M = $\pm 20\%$, P = +100 -0%, Z = +80 -20%, Q = +30 -10%, T = +200 -0%, C = ± 0.25 pF, D = ± 0.5 , F = ± 1 pF, G = ± 2 pF
Type	without spec.	Ceramic (MF) Polyester (PP) Polypropylene film (ALM) Aluminum electrolytic (TF) Twin film (SC) Semiconductor ceramic (MP) Metalised paper (MPP) Metalised plastic film (MMF) Metalised polyester (MF.PP) Polyester/polypropylene film (PS) Polystyrene (styrol) (TAN) or (TANT) Tantalum —N— Electrolytic (BP) or (NP) Non-polarised electrolytic
Characteristic	(only ceramic capacitors)	without spec. B or F (high dielectric) CH, SL, etc. Temperature compensating types

PCB-MAIN (AV1 series)



(AV1 series)

2

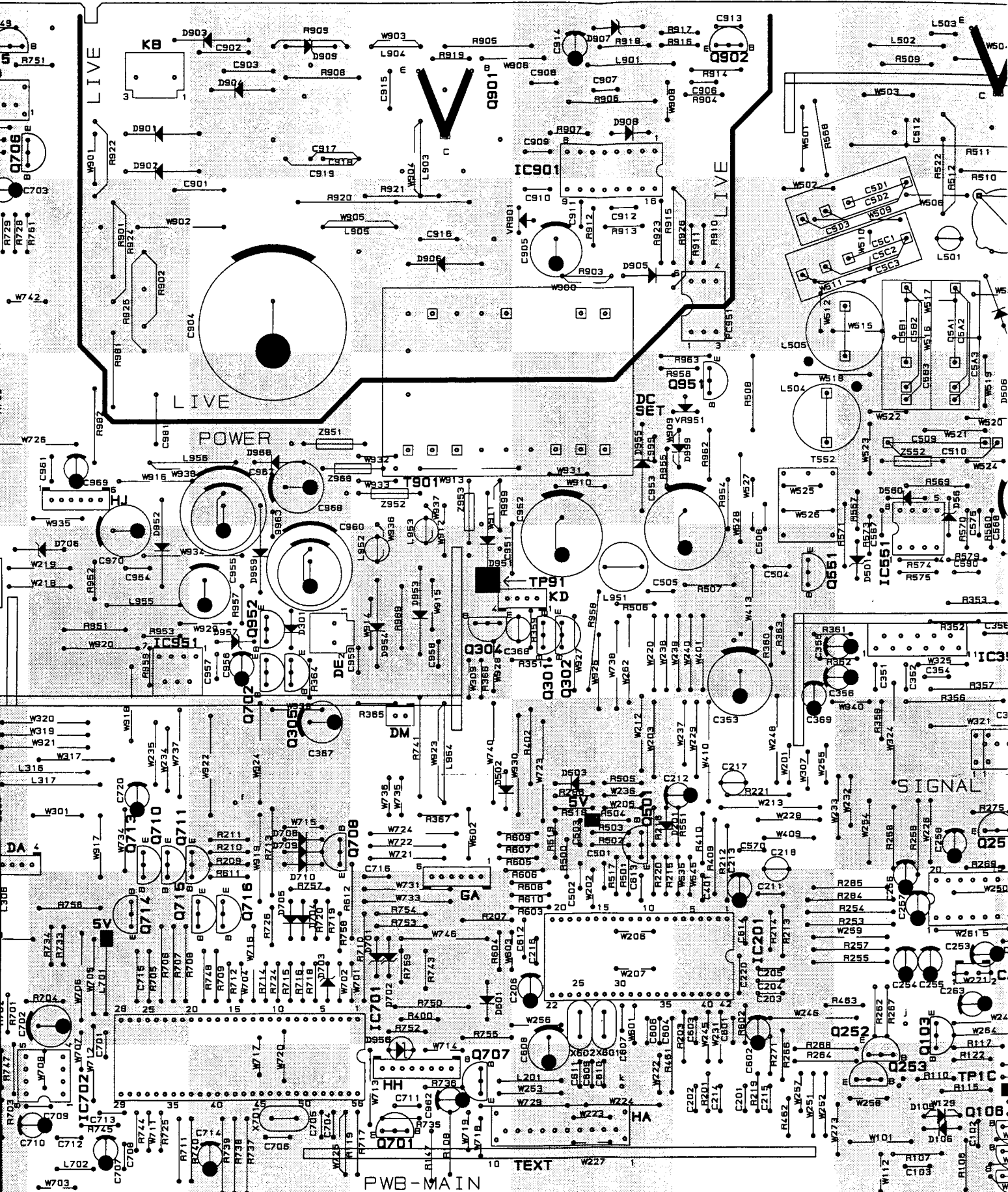
3

4

5

6

7



2

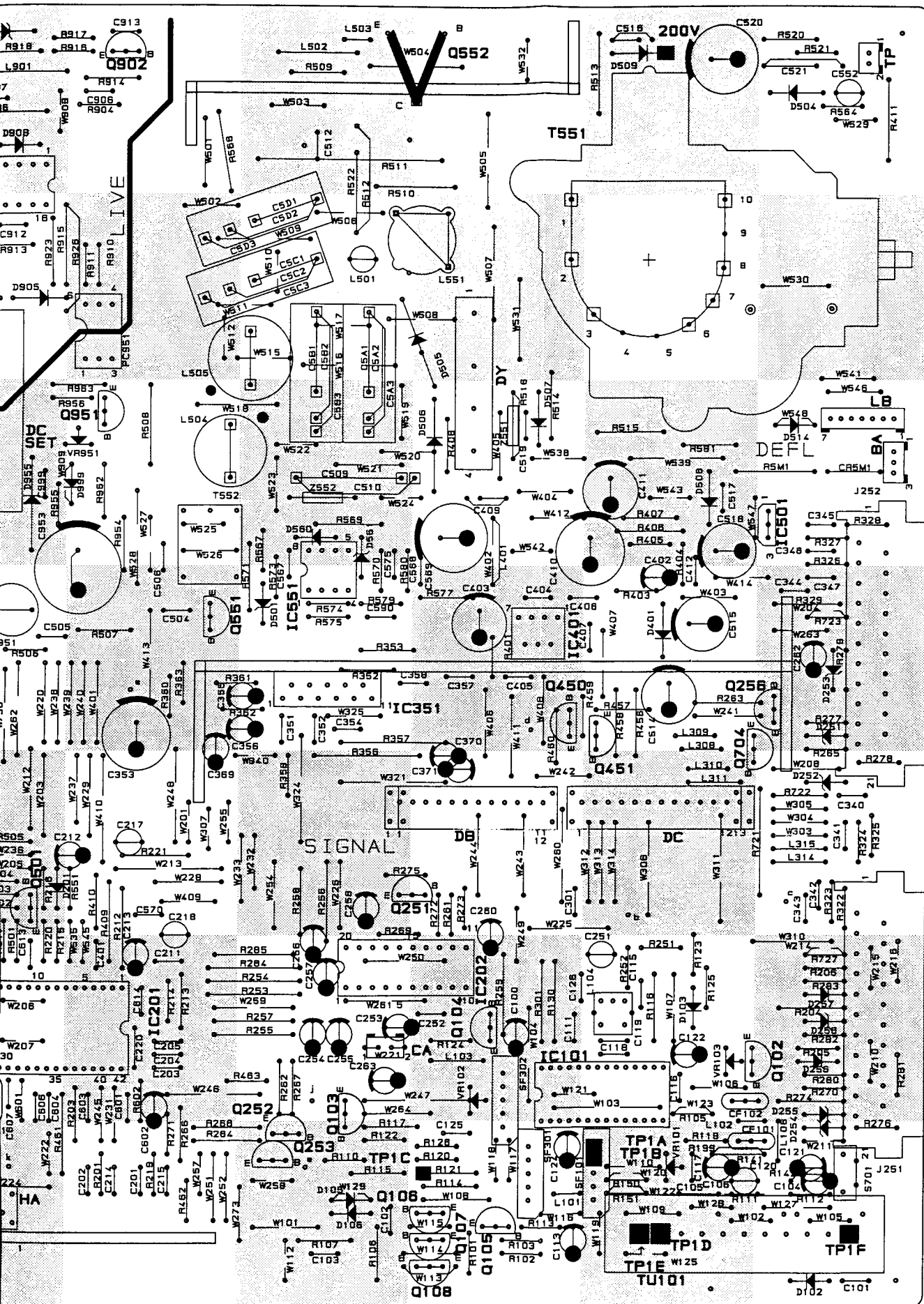
3

4

5

6

7



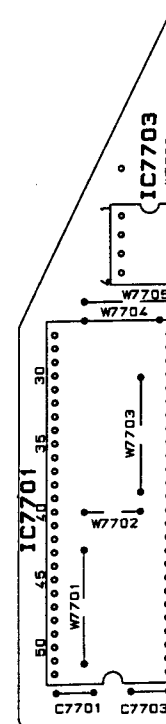
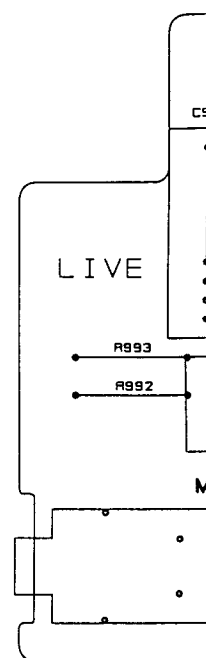
MAIN PCB COMPONENT ADDRESSES

C509	C7
C5A1	B7
C5A2	B7
C5A3	C7
C5B1	B7
C5B2	B7
C5B3	C7
C5C1	B7
C5C2	B7
C5C3	B7
C5D1	B7
C5D2	B7
C5D3	B6
C904	B3
C981	C2
CF101	G9
CF102	F9
CR5M1	C10
D102	G10
D103	F9
D105	G7
D106	G7
D201	E6
D251	D10
D252	E10
D253	D10
D254	G10
D255	F10
D256	F10
D257	F10
D258	F10
D301	D3
D401	D9
D501	D7
D502	E4
D503	E5
D504	A10
D505	B9
D506	C8
D507	C8
D508	C9
D509	A9
D514	C10
D560	C7
D561	C7
D601	F4
D701	F4
D702	F4
D703	F3
D704	F3
D705	F3
D706	D2

D708	E3
D709	E3
D710	E3
D901	A2
D902	A2
D903	A3
D904	A3
D905	B5
D906	B4
D907	A5
D908	A5
D909	A3
D951	D4
D952	D2
D953	D4
D954	D4
D955	C5
D956	G4
D957	D3
D959	D3
D968	C3
D999	C6
IC101	F9
IC201	F6
IC202	F8
IC351	D7
IC401	D8
IC501	C10
IC551	D7
IC701	F4
IC702	G2
IC901	A5
IC951	D2
J251	G10
J252	C10
J253	D1
J254	E1
J351	F1
L101	G8
L102	G9
L103	F8
L104	F9
L106	G10
L201	G5
L306	F1
L307	F1
L308	D9
L309	D9
L310	E9
L311	E9
L314	E10
L315	E10

L316	E2
L317	E2
L401	C8
L501	B7
L502	A7
L503	A7
L504	C6
L505	B6
L551	B8
L701	F2
L702	G2
L901	A5
L903	A4
L904	A4
L905	B4
L951	D5
L952	D4
L953	D4
L954	E4
L955	D2
L956	C3
PC951	B6
Q102	F10
Q103	F7
Q104	F8
Q105	G8
Q106	G8
Q107	G8
Q108	G7
Q251	E8
Q252	G7
Q253	G7
Q256	D10
Q301	D5
Q302	D5
Q304	D4
Q305	D3
Q450	D8
Q451	D9
Q501	E5
Q551	D6
Q552	A8
Q701	G4
Q702	D3
Q703	B1
Q704	D10
Q705	A1
Q706	A1
Q707	G4
Q708	E3
Q710	E2
Q711	E2

Q713	E2
Q714	F2
Q715	F3
Q716	F3
Q901	A4
Q902	A6
Q951	C6
Q952	D3
R352	D7
R353	D7
R406	C9
R508	C6
R511	A7
R512	A7
R513	A9
R514	C8
R516	C8
R573	D7
R574	D7
R575	D7
R5M1	C10
R921	B4
R954	C6
R955	C5
R981	C2
R982	C2
S701	G10
S702	B1
S703	B1
S704	C1
S705	C1
SF101	G9
SF301	G8
SF302	F8
T551	A8
T552	C6
T901	C4
TU101	G9
VR101	G9
VR102	F8
VR103	F9
VR901	B5
VR951	C6
X601	F5
X602	F5
X701	G3
Z551	C8
Z552	C7
Z951	C3
Z952	C4
Z953	C4
Z968	C3

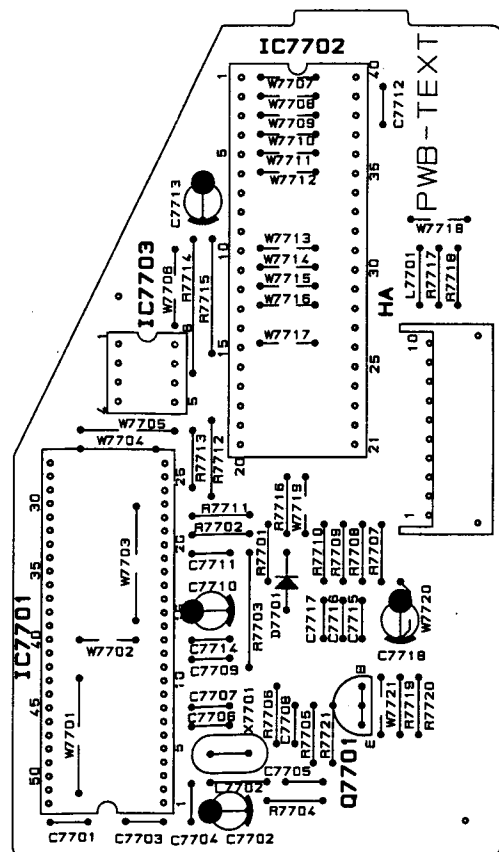
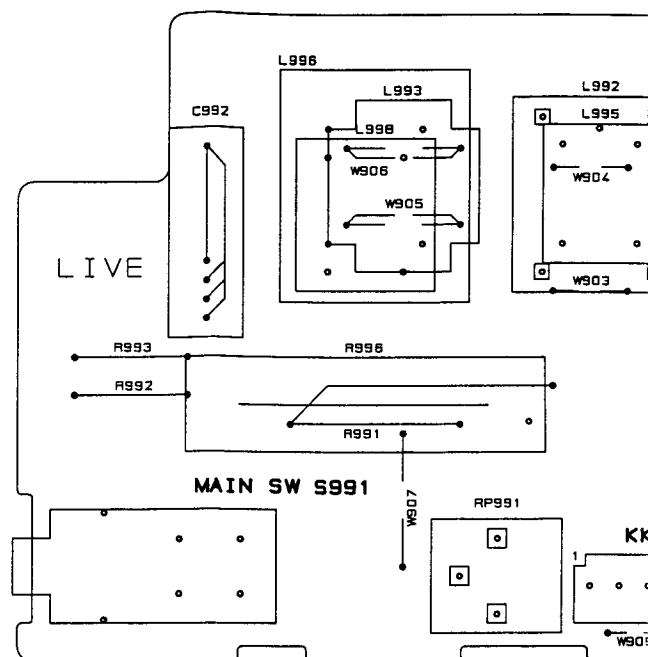


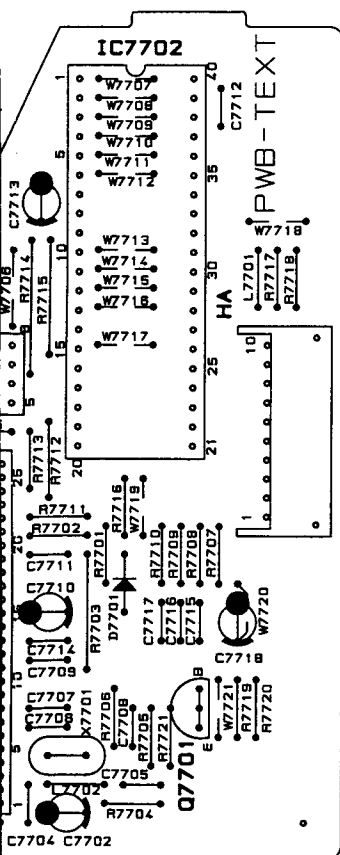
COMPONENT ADDRESSES

D708 E3
D709 E3
D710 E3
D901 A2
D902 A2
D903 A3
D904 A3
D905 B5
D906 B4
D907 A5
D908 A5
D909 A3
D951 D4
D952 D2
D953 D4
D954 D4
D955 C5
D956 G4
D957 D3
D959 D3
D968 C3
D999 C6
C101 F9
C201 F6
C202 F8
C351 D7
C401 D8
C501 C10
C551 D7
C701 F4
C702 G2
C901 A5
C951 D2
J251 G10
J252 C10
J253 D1
J254 E1
J351 F1
L101 G8
L102 G9
L103 F8
L104 F9
L106 G10
L201 G5
L306 F1
L307 F1
L308 D9
L309 D9
L310 E9
L311 E9
L314 E10
L315 E10

L316 E2
L317 E2
L401 C8
L501 B7
L502 A7
L503 A7
L504 C6
L505 B6
L551 B8
L701 F2
L702 G2
L901 A5
L903 A4
L904 A4
L905 B4
L951 D5
L952 D4
L953 D4
L954 E4
L955 D2
L956 C3
PC951 B6
Q102 F10
Q103 F7
Q104 F8
Q105 G8
Q106 G8
Q107 G8
Q108 G7
Q251 E8
Q252 G7
Q253 G7
Q256 D10
Q301 D5
Q302 D5
Q304 D4
Q305 D3
Q450 D8
Q451 D9
Q501 E5
Q551 D6
Q552 A8
Q701 G4
Q702 D3
Q703 B1
Q704 D10
Q705 A1
Q706 A1
Q707 G4
Q708 E3
Q710 E2
Q711 E2

Q713 E2
Q714 F2
Q715 F3
Q716 F3
Q901 A4
Q902 A6
Q951 C6
Q952 D3
R352 D7
R353 D7
R406 C9
R508 C6
R511 A7
R512 A7
R513 A9
R514 C8
R516 C8
R573 D7
R574 D7
R575 D7
R5M1 C10
R921 B4
R954 C6
R955 C5
R981 C2
R982 C2
S701 G10
S702 B1
S703 B1
S704 C1
S705 C1
SF101 G9
SF301 G8
SF302 F8
T551 A8
T552 C6
T901 C4
TU101 G9
VR101 G9
VR102 F8
VR103 F9
VR901 B5
VR951 C6
X601 F5
X602 F5
X701 G3
Z551 C8
Z552 C7
Z951 C3
Z952 C4
Z953 C4
Z968 C3

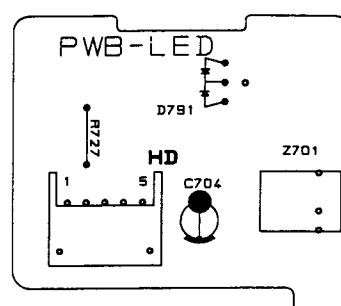




IC7701
IC7702
Q7701
D7701
L7701
L7702
X7701

C991
C993
F991
L991
L992
L993
L994
L995
L996
L997
L998
R991
R992
R993
RP991
S991

D791
Z701



PCB-SAT COMPONENT ADDRESSES

C101	D4
C102	C4
C103	C4
C104	D4
C105	C3
C106	D3
C107	D4
C108	D3
C109	D3
C110	D3
C111	D3
C112	D2
C113	D2
C114	E3
C115	D2
C116	E3
C117	D3
C118	E3
C119	D3
C120	E3
C121	E3
C122	F3
C123	E3
C124	F3
C125	F4
C126	E3
C127	D4
C128	E3
C129	E4
C130	D5
C131	E4
C132	E5
C133	G3
C134	H3
C135	H2
C136	H1
C137	H2
C138	J2
C139	H1
C140	J3
C141	J2
C142	H1
C143	H1
C144	J2
C145	J2
C146	F5
C147	G4
C148	F5
C149	A4
C151	B5
C152	B5
C153	B5
C154	B5
C155	E5

C156	E5
C157	E5
C158	F5
C159	F4
C160	G5
C161	G5
C162	G5
C163	G4
C164	F4
C165	G5
C166	G4
C167	G3
C168	G4
C169	G3
C170	G3
C171	F4
C172	E2
C174	G3
C175	F3
C176	E2
C177	E2
C178	E3
C179	F4
C180	F4
C181	A4
C182	A5
C183	C5
C189	G3
C192	D5
C193	J3
C194	J3
C195	E1
C196	E1
C197	D3
C198	D3
C199	F4
C241	C4
C242	C3
C243	H3
C244	H3
D100	D3
D101	D3
D102	D3
D103	D3
D109	C4
D110	C4
D111	F1
D112	F1
D113	E1
IC100	E4
IC101	G1
IC102	H2
IC103	B5
IC104	C4

IC105	F2
IC106	E2
IC107	D2
IC108	A5
IC109	C3
L100	D3
L101	D2
L102	F5
L103	G4
L104	F5
L105	F4
L106	F4
Q102	D1
Q103	F3
Q104	G3
Q105	H3
Q106	J3
Q107	J3
Q108	G5
Q109	B4
Q110	B4
Q111	B4
Q112	B4
Q113	F5
Q114	F4
Q115	F3
Q116	F1
Q117	F1
Q118	G1
Q119	G1
Q120	F4
Q121	A4
Q122	A4
Q123	A4
Q124	C2
Q125	C3
Q126	C3
Q127	C5
Q128	C5
Q129	B3
Q130	B3
Q131	B3
Q132	B3
Q135	E1
Q136	J3
Q137	G1
Q138	G1
Q139	H3
R108	E1
R109	E1
R110	D1
R111	D4
R112	C4
R113	C4

R114	C4
R115	C3
R116	C3
R117	D3
R118	C3
R119	D2
R120	D3
R121	E3
R122	E2
R123	E2
R125	E3
R126	E3
R127	E3
R128	F3
R129	F3
R130	F3
R131	F4
R132	F4
R133	D4
R134	D4
R135	E3
R136	E4
R137	D5
R138	D5
R139	E5
R140	E5
R141	E5
R142	H1
R143	J1
R144	G3
R145	G3
R146	H2
R147	H2
R148	G1
R149	G1
R150	H1
R151	H1
R152	H1
R153	J1
R154	H1
R155	H2
R156	H1
R157	J1
R158	H3
R159	J4
R160	J2
R161	J2
R162	J2
R163	H2
R164	H1
R165	H1
R166	J1
R167	J1
R168	G4

R169	H4
R170	G4
R171	G5
R172	B4
R173	B4
R174	A5
R175	A5
R176	A5
R177	A3
R178	B4
R179	B4
R180	B4
R181	B4
R183	E5
R184	E5
R185	E5
R186	E5
R187	F5
R189	G4
R190	G4
R191	G3
R192	G3
R193	G3
R194	F1
R195	F1
R196	G1
R197	G1
R199	F1
R200	E2
R201	E1
R203	E2
R204	G1
R206	G1
R207	G1
R208	G1
R209	F2
R210	F2
R211	F2
R212	G1
R213	G2
R214	G3
R215	F3
R216	F3
R217	G3
R218	E3
R219	F3
R220	E2
R221	E2
R222	D2
R223	D2
R224	F4
R225	F4
R226	F4
R227	F4

COMPONENT ADDRESSES

C156 E5
C157 E5
C158 F5
C159 F4
C160 G5
C161 G5
C162 G5
C163 G4
C164 F4
C165 G5
C166 G4
C167 G3
C168 G4
C169 G3
C170 G3
C171 F4
C172 E2
C174 G3
C175 F3
C176 E2
C177 E2
C178 E3
C179 F4
C180 F4
C181 A4
C182 A5
C183 C5
C189 G3
C192 D5
C193 J3
C194 J3
C195 E1
C196 E1
C197 D3
C198 D3
C199 F4
C241 C4
C242 C3
C243 H3
C244 H3
D100 D3
D101 D3
D102 D3
D103 D3
D109 C4
D110 C4
D111 F1
D112 F1
D113 E1
IC100 E4
IC101 G1
IC102 H2
IC103 B5
IC104 C4

IC105 F2
IC106 E2
IC107 D2
IC108 A5
IC109 C3
L100 D3
L101 D2
L102 F5
L103 G4
L104 F5
L105 F4
L106 F4
Q102 D1
Q103 F3
Q104 G3
Q105 H3
Q106 J3
Q107 J3
Q108 G5
Q109 B4
Q110 B4
Q111 B4
Q112 B4
Q113 F5
Q114 F4
Q115 F3
Q116 F1
Q117 F1
Q118 G1
Q119 G1
Q120 F4
Q121 A4
Q122 A4
Q123 A4
Q124 C2
Q125 C3
Q126 C3
Q127 C5
Q128 C5
Q129 B3
Q130 B3
Q131 B3
Q132 B3
Q135 E1
Q136 J3
Q137 G1
Q138 G1
Q139 H3
R108 E1
R109 E1
R110 D1
R111 D4
R112 C4
R113 C4

R114 C4
R115 C3
R116 C3
R117 D3
R118 C3
R119 D2
R120 D3
R121 E3
R122 E2
R123 E2
R125 E3
R126 E3
R127 E3
R128 F3
R129 F3
R130 F3
R131 F4
R132 F4
R133 D4
R134 D4
R135 E3
R136 E4
R137 D5
R138 D5
R139 E5
R140 E5
R141 E5
R142 H1
R143 J1
R144 G3
R145 G3
R146 H2
R147 H2
R148 G1
R149 G1
R150 H1
R151 H1
R152 H1
R153 J1
R154 H1
R155 H2
R156 H1
R157 J1
R158 H3
R159 J4
R160 J2
R161 J2
R162 J2
R163 H2
R164 H1
R165 H1
R166 J1
R167 J1
R168 G4

R169 H4
R170 G4
R171 G5
R172 B4
R173 B4
R174 A5
R175 A5
R176 A5
R177 A3
R178 B4
R179 B4
R180 B4
R181 B4
R183 E5
R184 E5
R185 E5
R186 E5
R187 F5
R189 G4
R190 G4
R191 G3
R192 G3
R193 G3
R194 F1
R195 F1
R196 G1
R197 G1
R199 F1
R200 E2
R201 E1
R203 E2
R204 G1
R206 G1
R207 G1
R208 G1
R209 F2
R210 F2
R211 F2
R212 G1
R213 G2
R214 G3
R215 F3
R216 F3
R217 G3
R218 E3
R219 F3
R220 E2
R221 E2
R222 D2
R223 D2
R224 F4
R225 F4
R226 F4
R227 F4

R228 F4
R229 A4
R230 A4
R231 A5
R232 A5
R233 A4
R234 A4
R235 A4
R236 A5
R237 C2
R238 C2
R239 C3
R240 C3
R241 C4
R242 C5
R243 C5
R244 B4
R245 B3
R246 B3
R247 B4
R248 B3
R249 C4
R250 F2
R251 F2
R252 F2
R253 E2
R260 C4
R261 C5
R262 E1
R263 E1
R264 C3
R265 J3
R266 J3
R267 J3
R268 H3
R270 J4
R271 D4
R272 E4
R273 B3
SK100 J3
TU100 H4
XT100 D5
XT101 F3

A

B

C

D

E

F

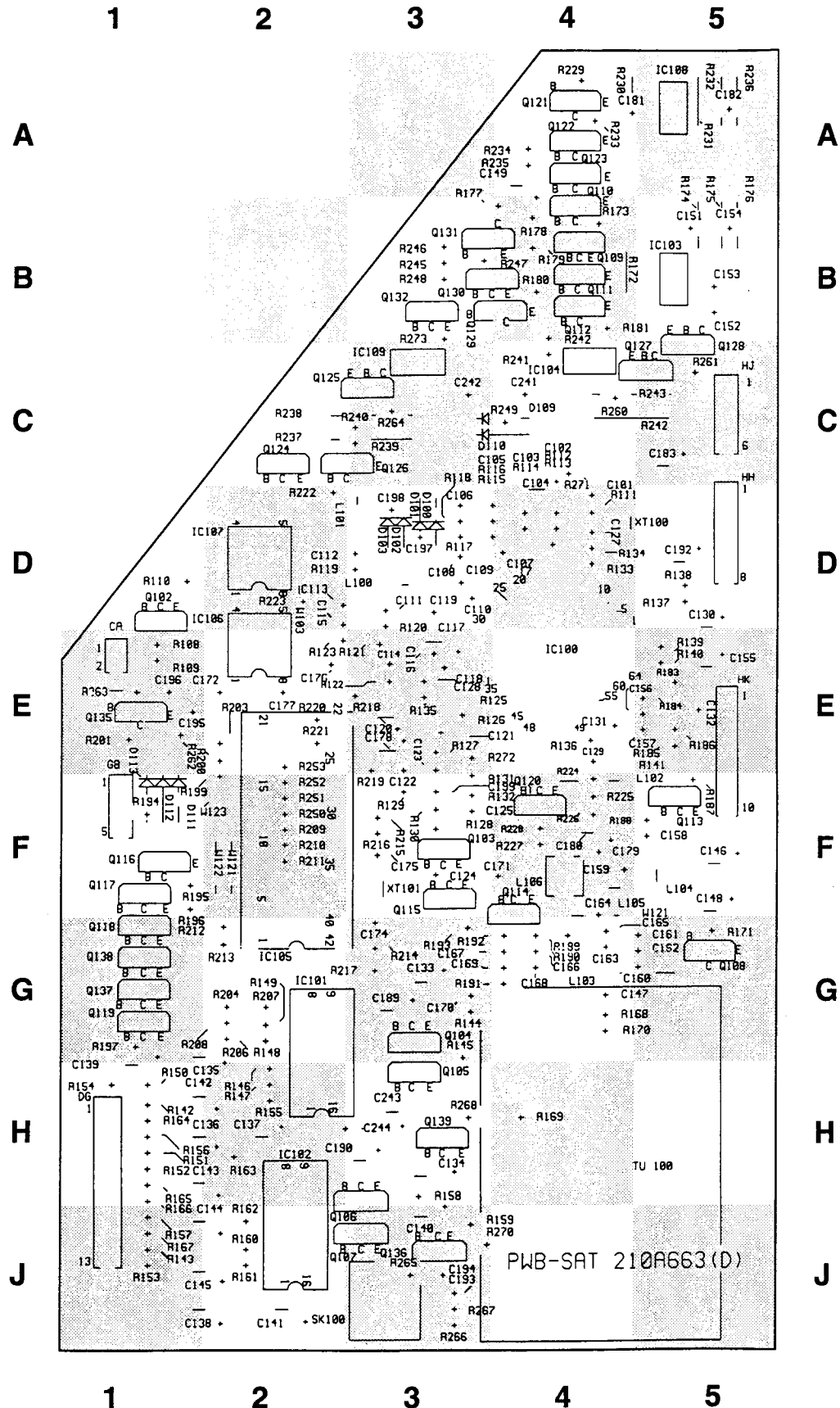
G

H

J

PCB-SAT

R228	F4
R229	A4
R230	A4
R231	A5
R232	A5
R233	A4
R234	A4
R235	A4
R236	A5
R237	C2
R238	C2
R239	C3
R240	C3
R241	C4
R242	C5
R243	C5
R244	B4
R245	B3
R246	B3
R247	B4
R248	B3
R249	C4
R250	F2
R251	F2
R252	F2
R253	E2
R260	C4
R261	C5
R262	E1
R263	E1
R264	C3
R265	J3
R266	J3
R267	J3
R268	H3
R270	J4
R271	D4
R272	E4
R273	B3
SK100	J3
TU100	H4
XT100	D5
XT101	F3



PCB DOLBY ADDRESSES

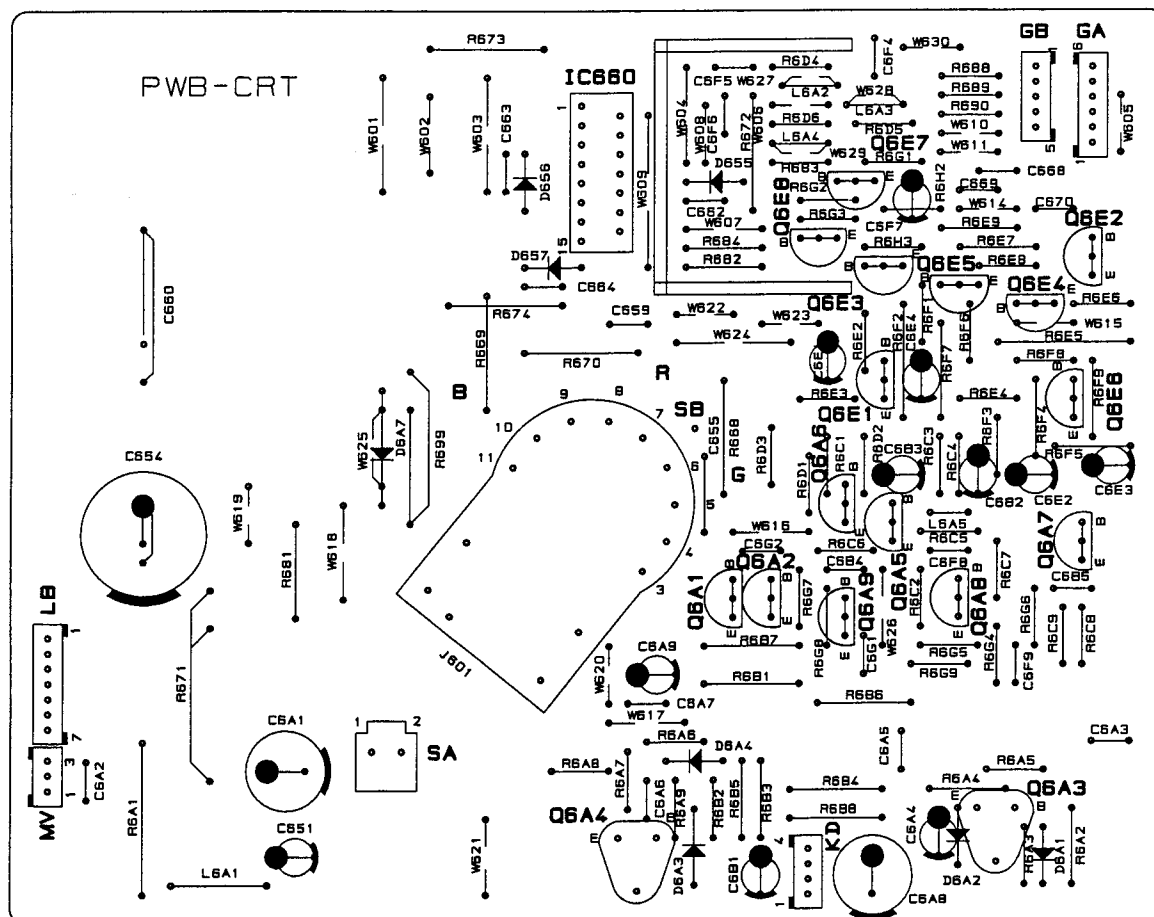
PCB CRT

D655	Q6A4
D656	Q6A5
D657	Q6A6
IC660	Q6A7
J601	Q6A8
R671	Q6A9
D6A1	Q6E1
D6A2	Q6E2
D6A3	Q6E3
D6A4	Q6E4
D6A7	Q6E5
L6A1	Q6E6
L6A2	Q6E7
L6A3	Q6E8
L6A4	R6B4
L6A5	R6B6
Q6A1	R6B7
Q6A2	R6B8
Q6A3	

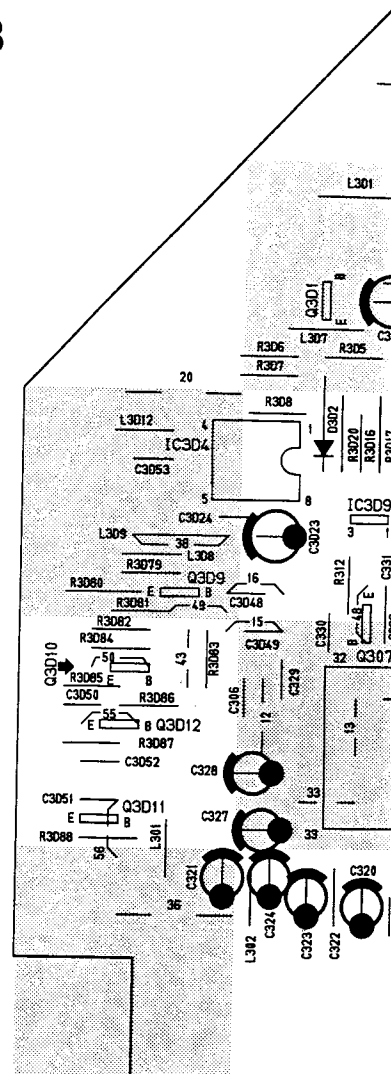
D302	D5
D303	F3
D304	D3
D3D1	C2
D3D2	D2
D3D3	C2
D3D4	C3
IC301	E4
IC3D1	C5
IC3D2	B5
IC3D3	C3
IC3D4	D1
IC3D5	B3
IC3D6	A4
IC3D7	A5
IC3D8	B4
IC3D9	D2
L301	E1
L302	F2
L303	D3

L303	D5
L304	E5
L305	E5
L308	F3
L309	F3
L311	F4
L320	E5
L3D1	C2
L3D10	A3
L3D11	B2
L3D12	D1
L3D2	D4
L3D4	B4
L3D5	B4
L3D6	C6
L3D7	C2
L3D8	D1
L3D9	D1
Q302	E4
Q303	D4

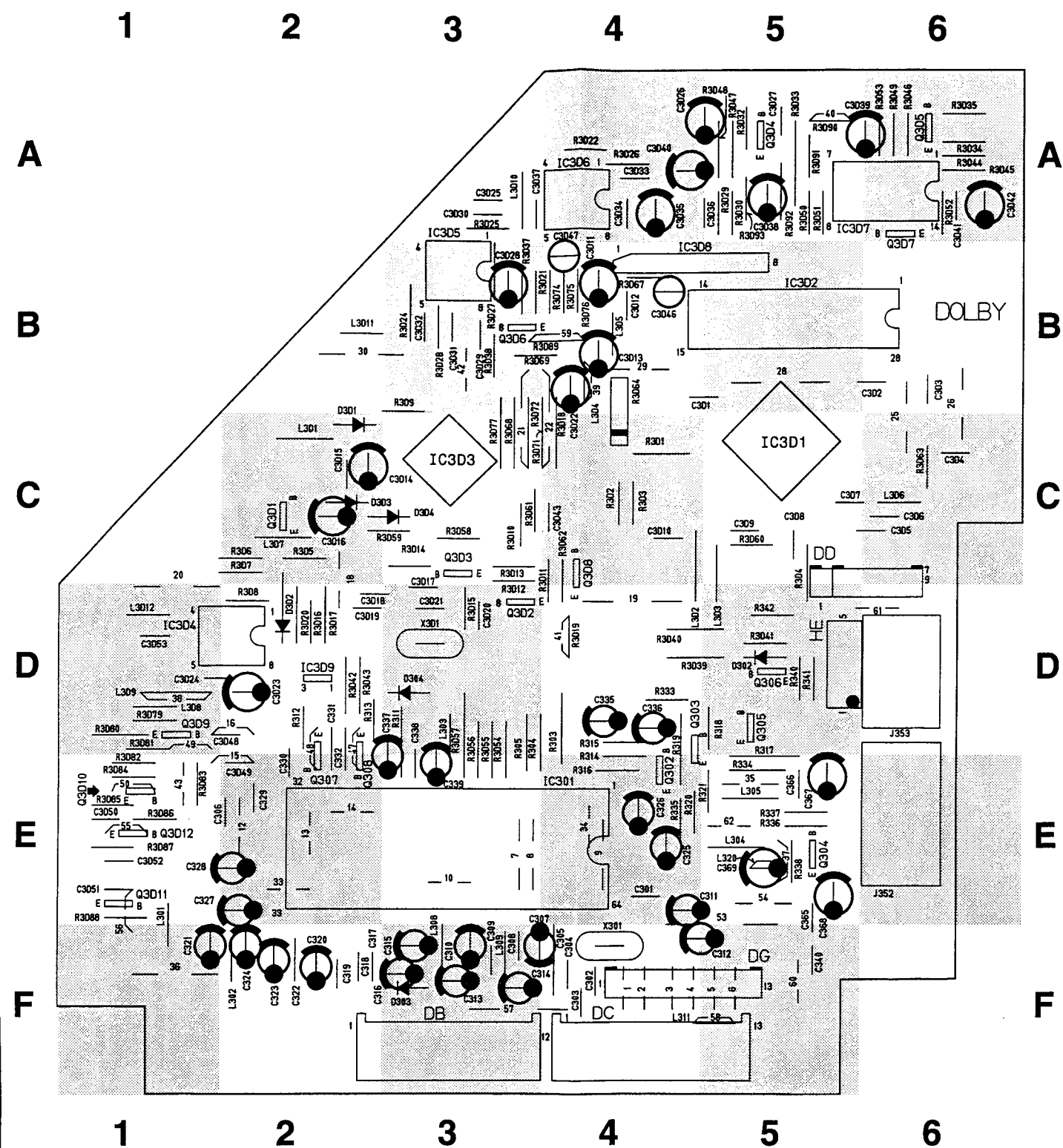
Q304	E5
Q305	D5
Q306	D5
Q307	E2
Q308	E2
Q3D1	C2
Q3D10	E1
Q3D11	E1
Q3D12	E1
Q3D2	D3
Q3D3	C3
Q3D4	A5
Q3D5	A6
Q3D6	B3
Q3D7	A6
Q3D8	C4
Q3D9	D1
X301	F4
X3D1	D3



2

F

2



A

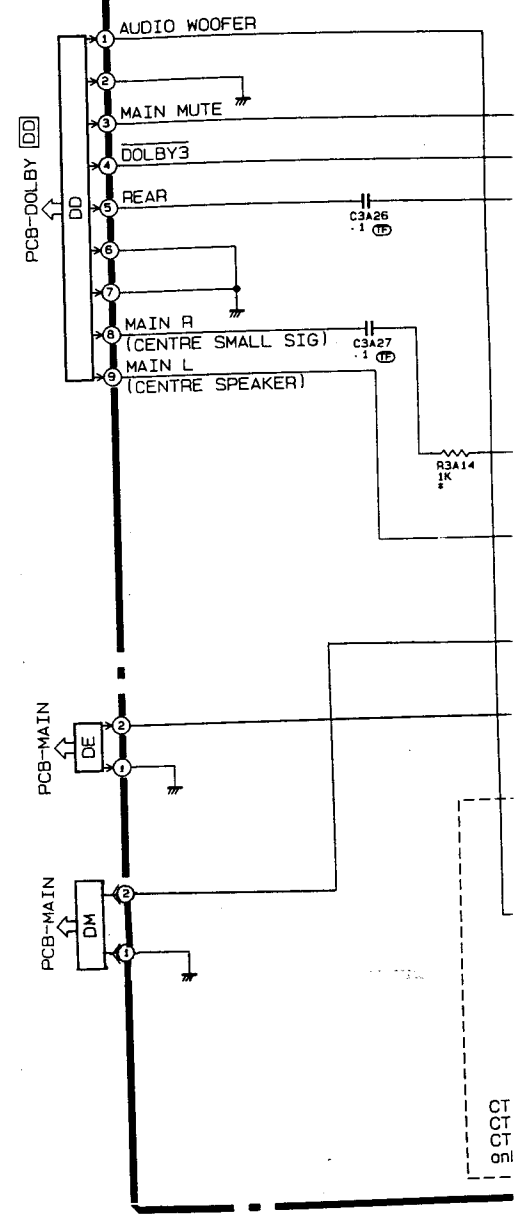
B

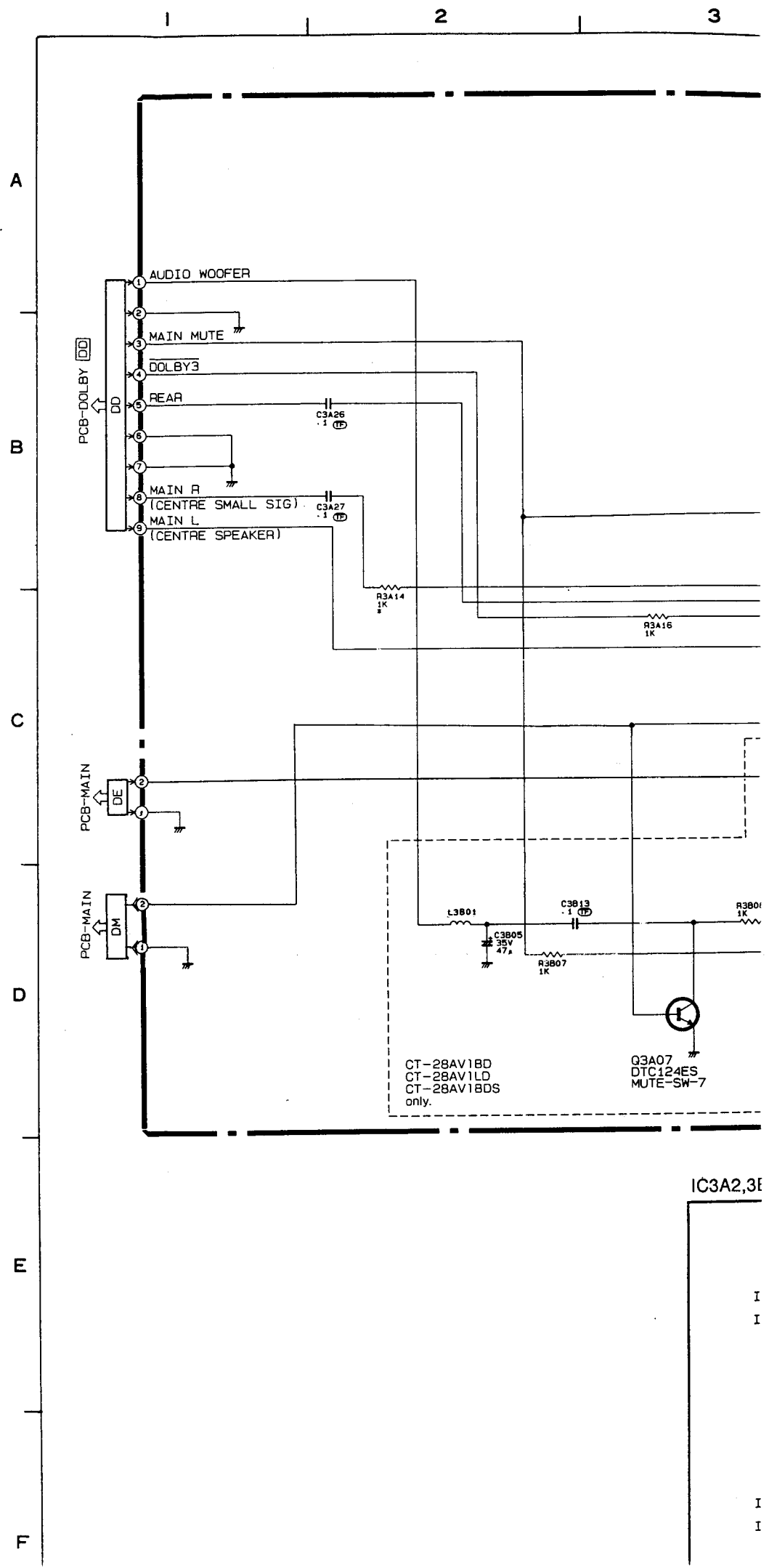
C

D

E

F

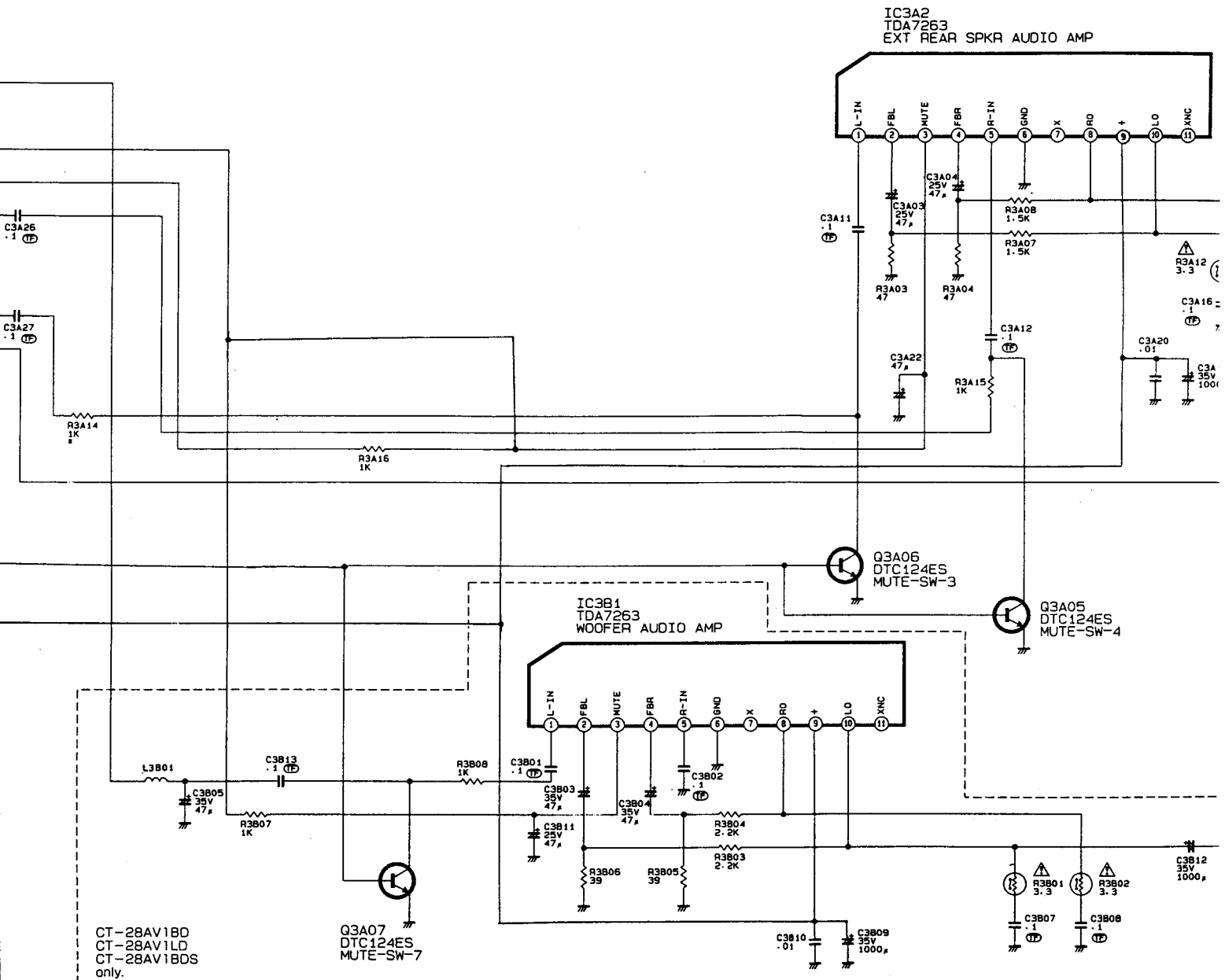




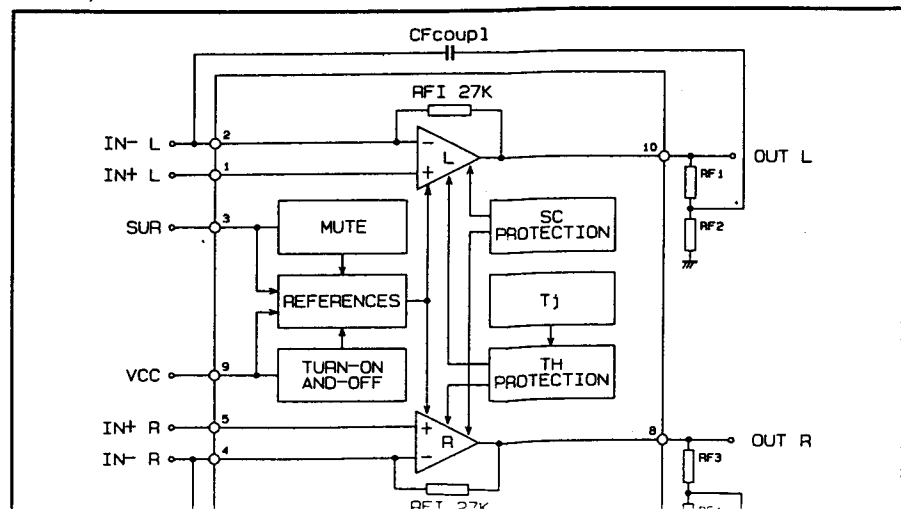
IC3A2,3E

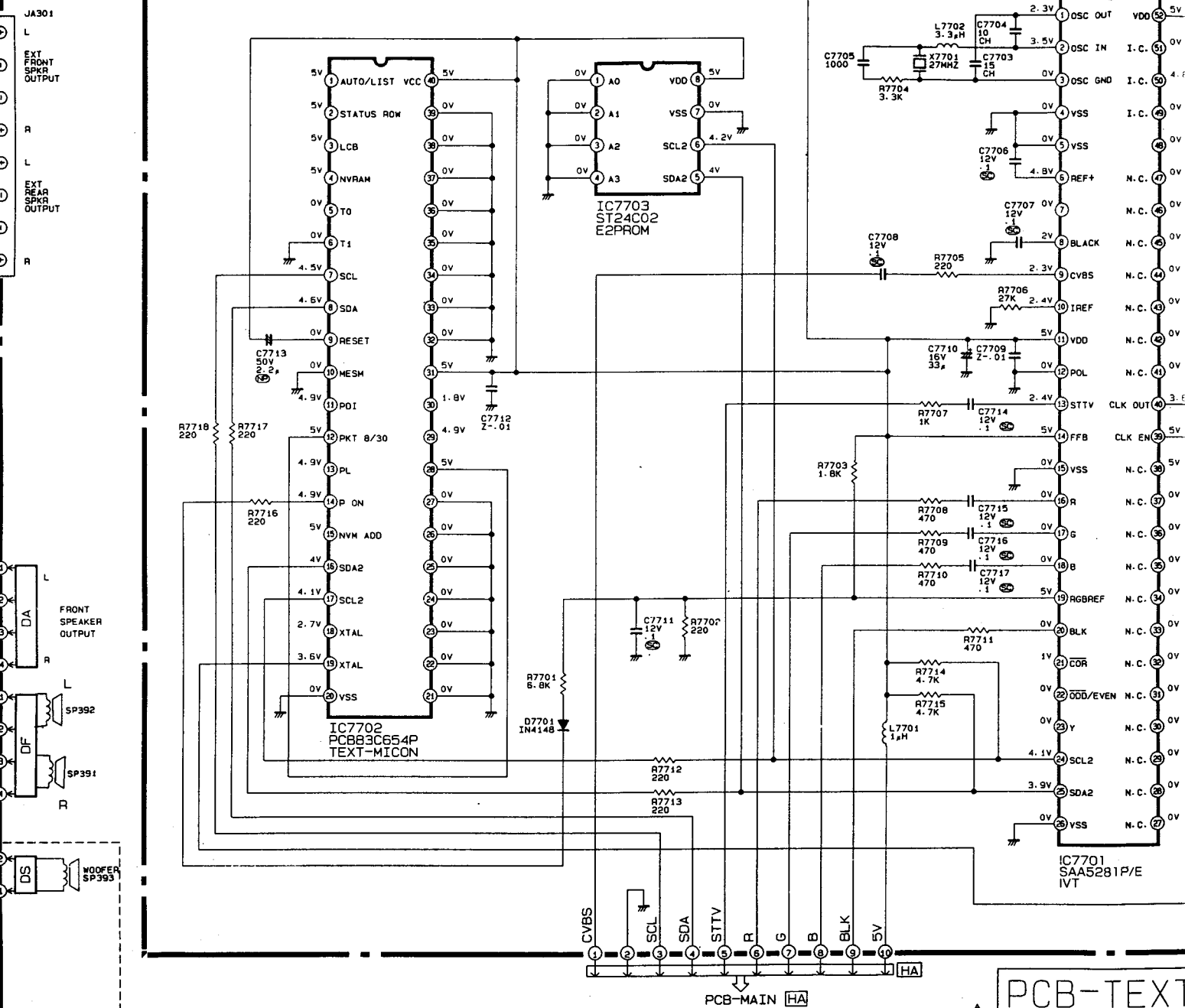
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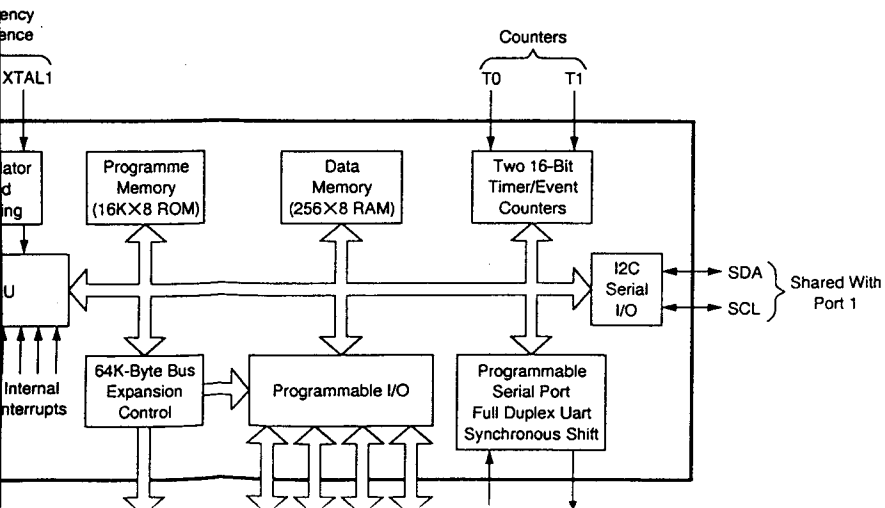


IC3A2,3B1 TDA7263

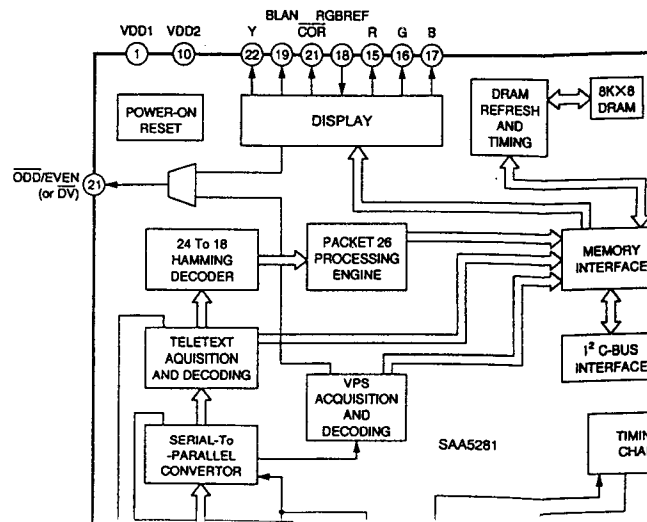


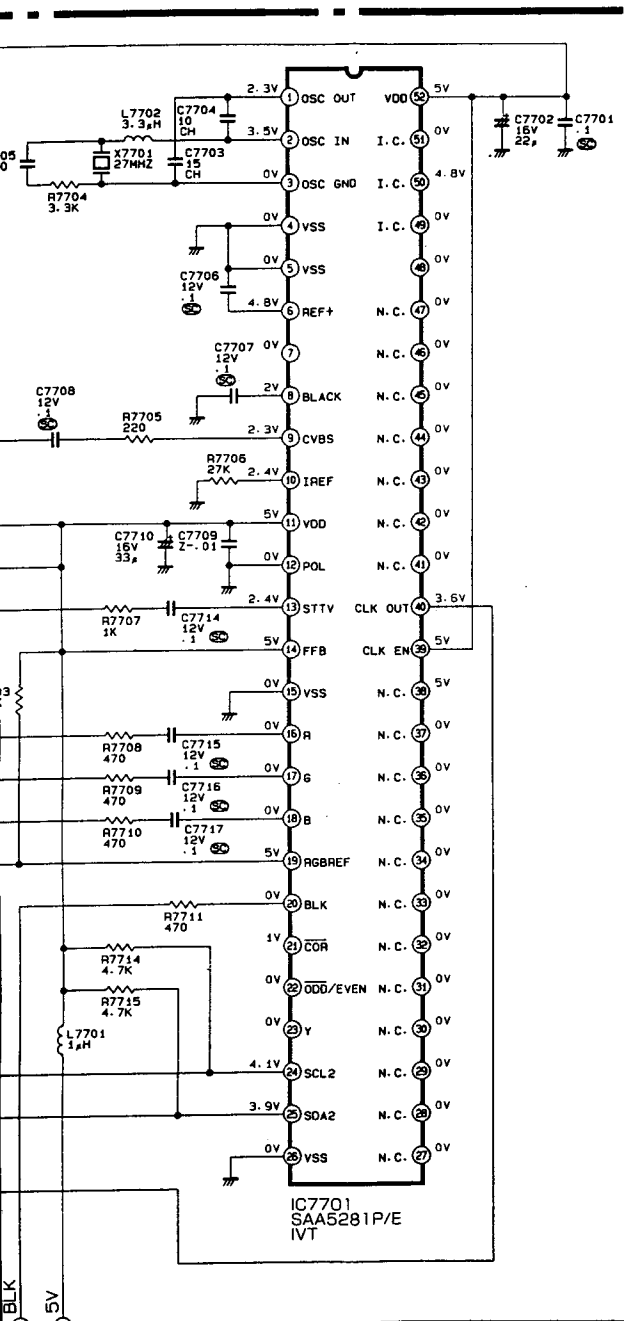


PCB83C654P



IC7701 SAA5281ZP/E





PCB-TEXT

PCB-VIDEOCRYP

VideoCrypt Decoder

The VideoCrypt decoder PCB is only serviceable by Mitsubishi service department.

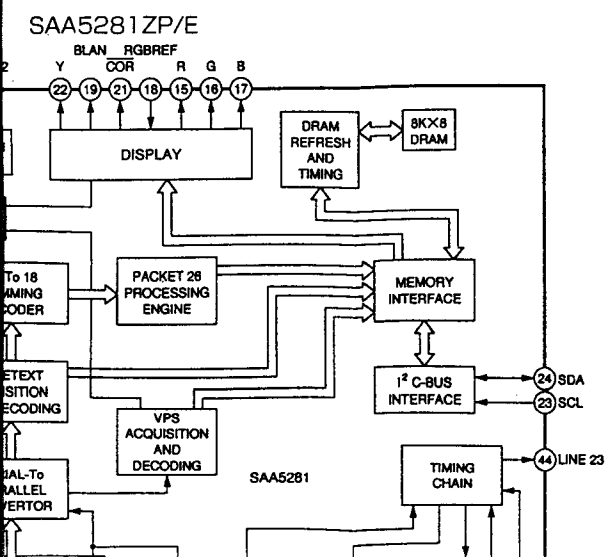
In the event of a fault on this PCB, please follow this procedure:

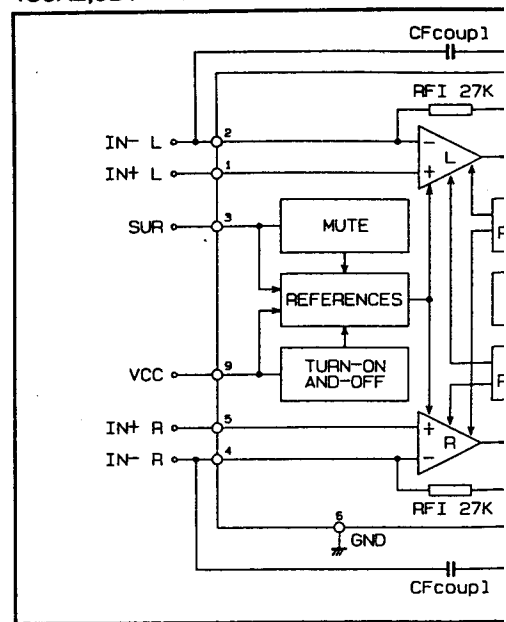
1. Contact the Mitsubishi consumer spares department to request an advance replacement VideoCrypt decoder PCB.
2. Upon receipt of the replacement PCB, complete the enclosed form and return it with the faulty PCB, in the packaging provided.

Failure to return the PCB within 30 days will incur full replacement PCB costs.

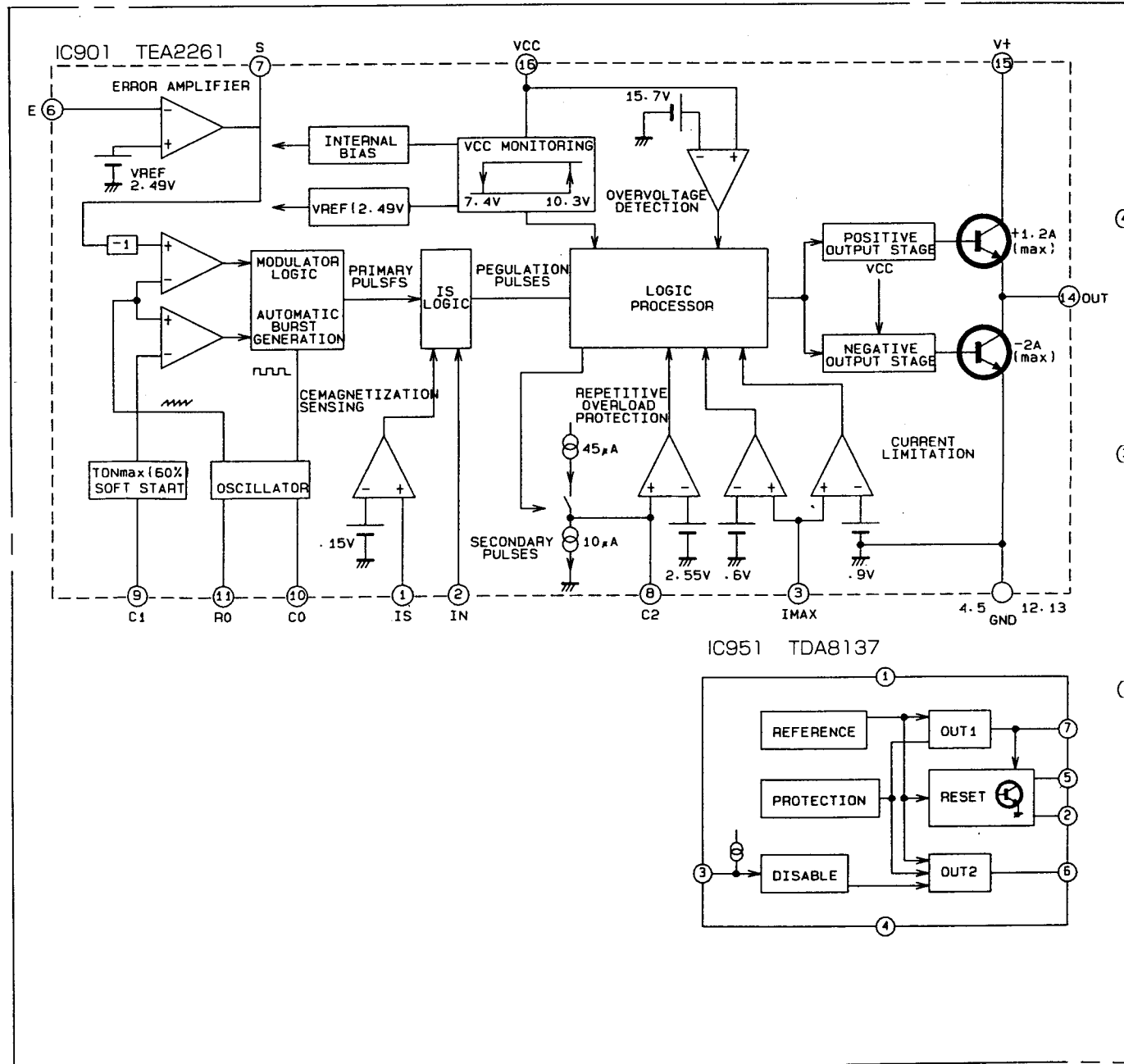
NOTE

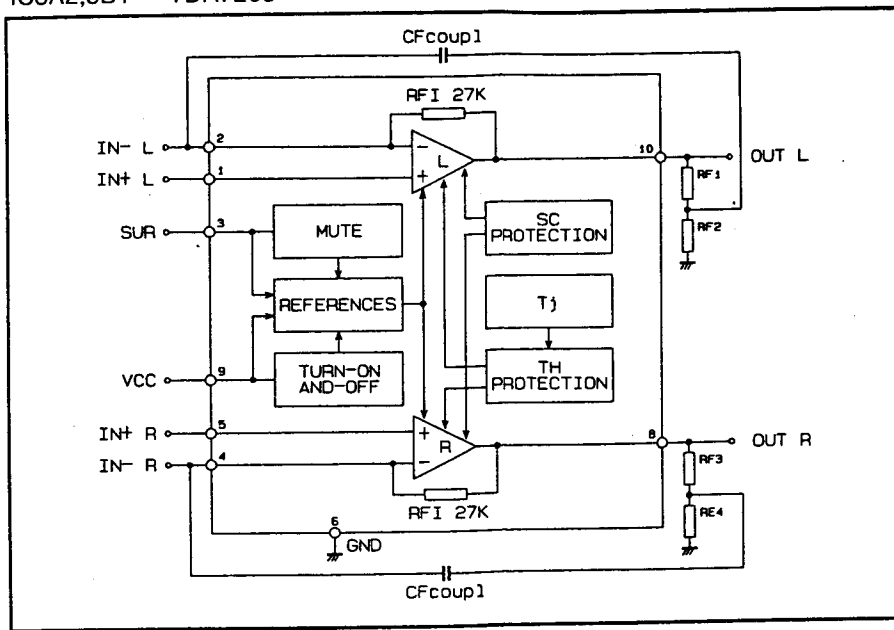
The plastic PCB frame, connecting lead and fixing screw should be retained as the replacement PCB is supplied *without* these items.



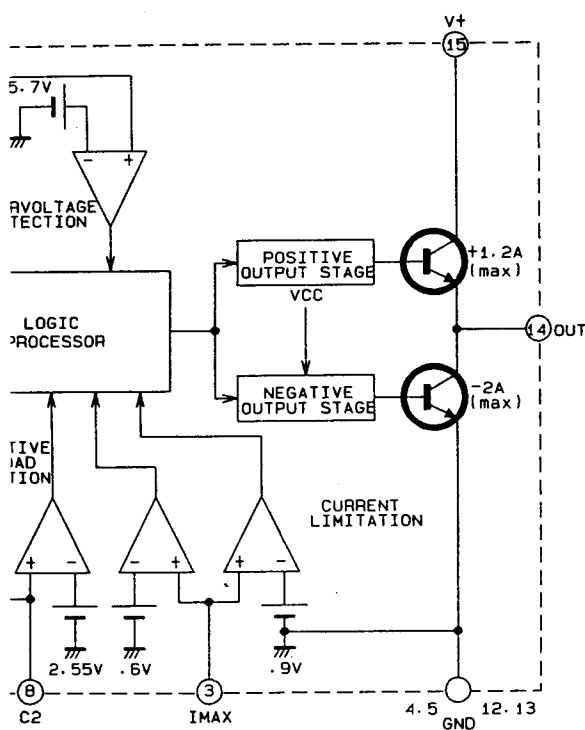


< IC block diagrams of PCB-MIAN and CRT

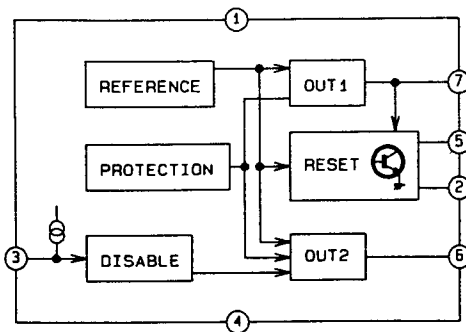




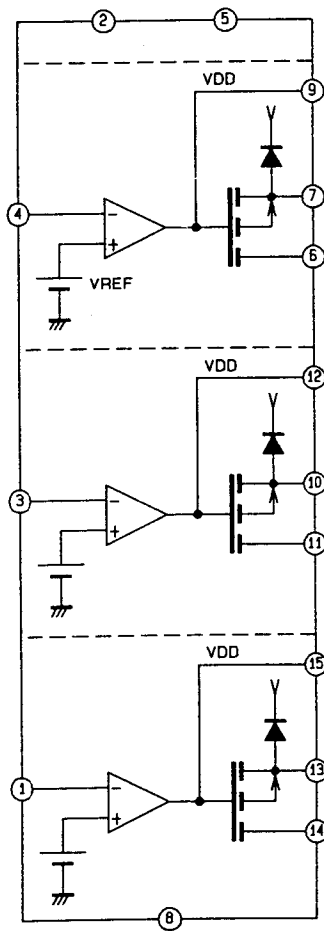
PCB-MIAN and CRT >



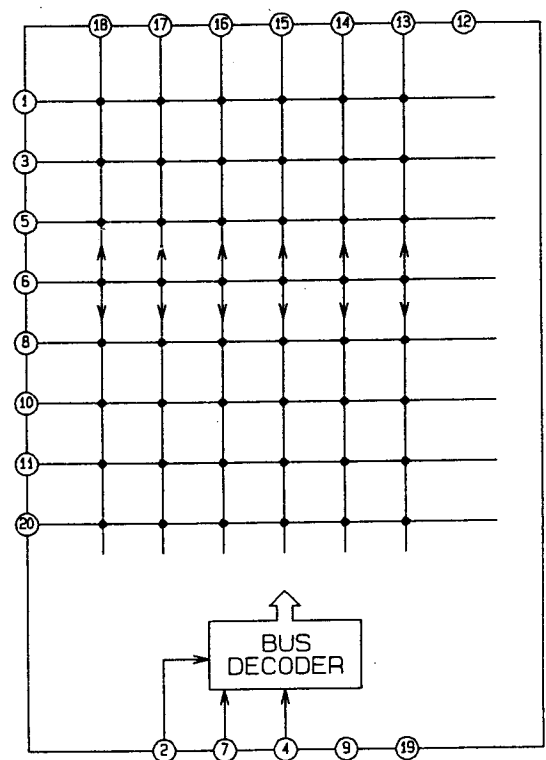
IC951 TDA8137



IC660 TEA5101

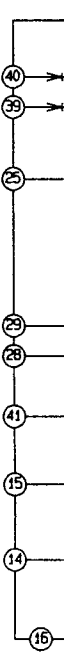


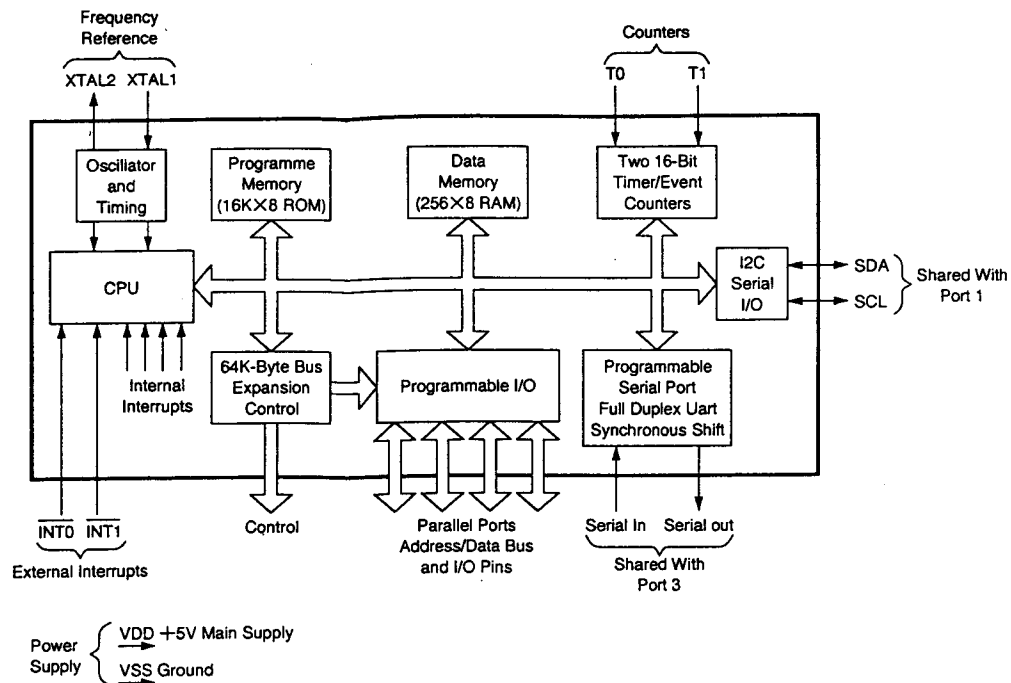
IC202 TEA6415C



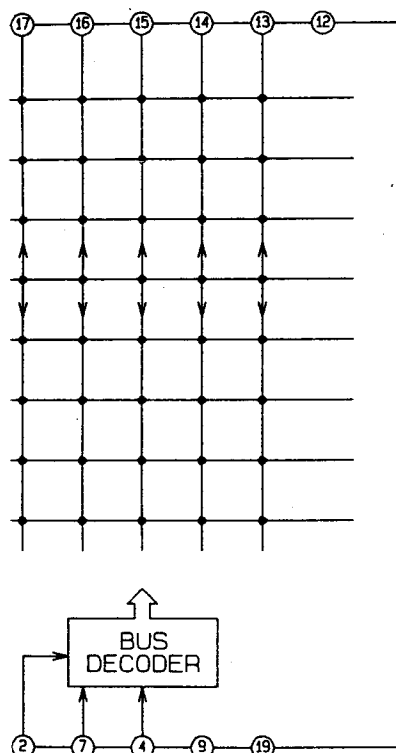
BUS DECODER

IC202

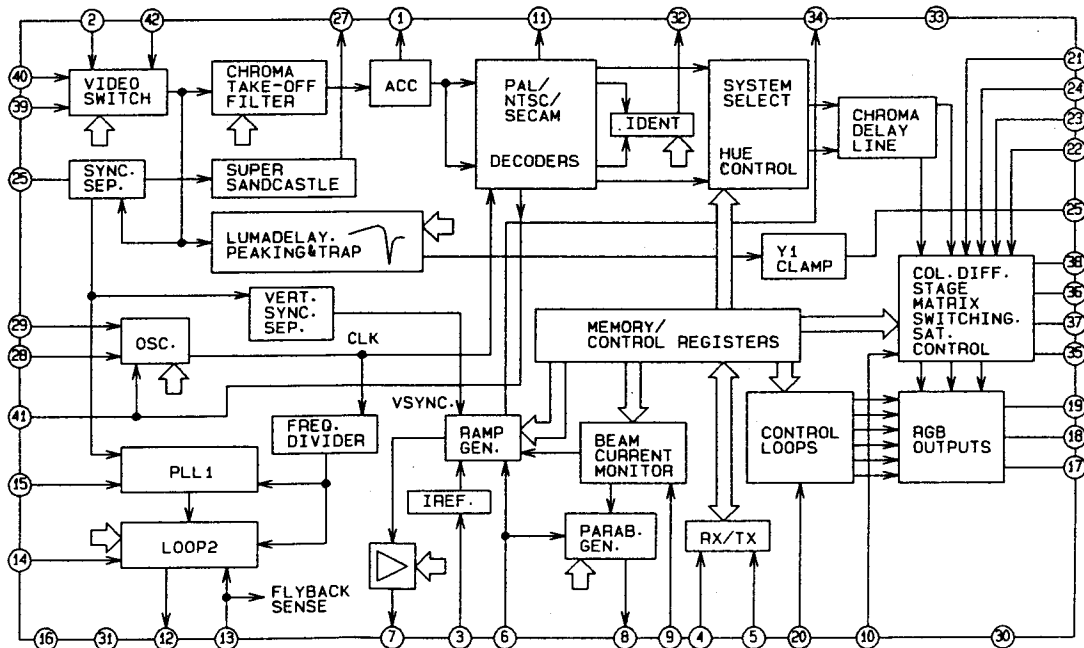




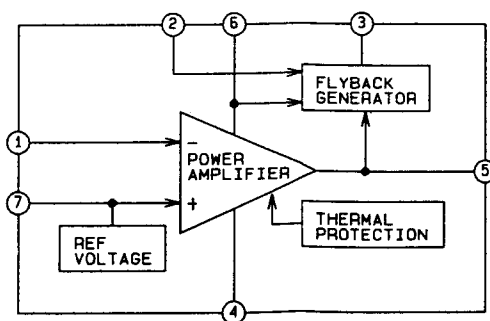
EA6415C



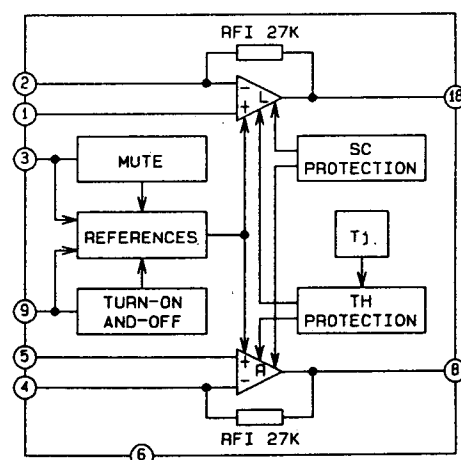
IC201 MC44031

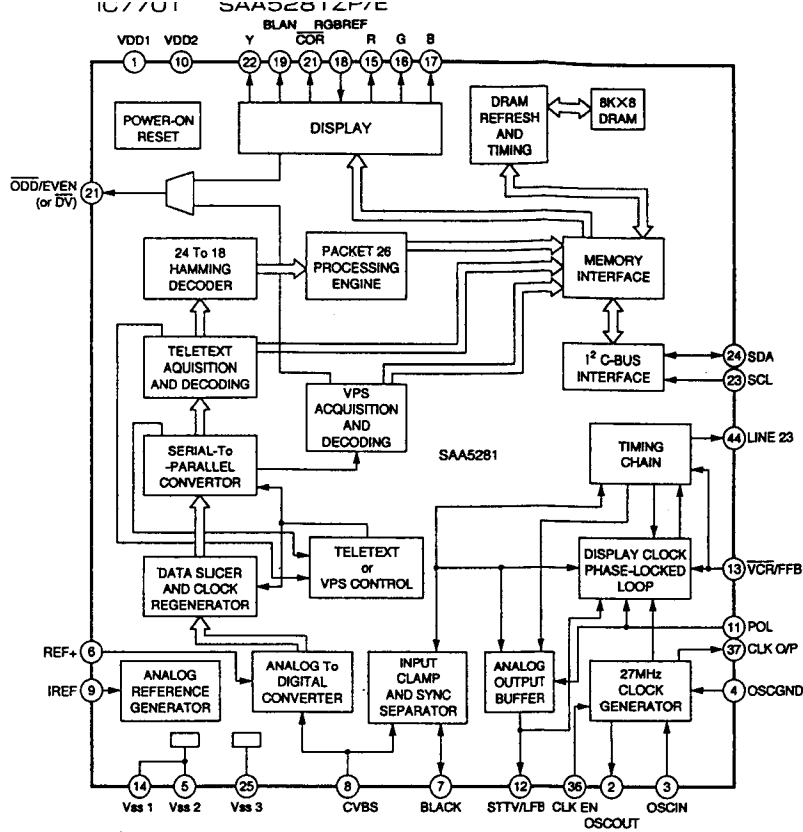
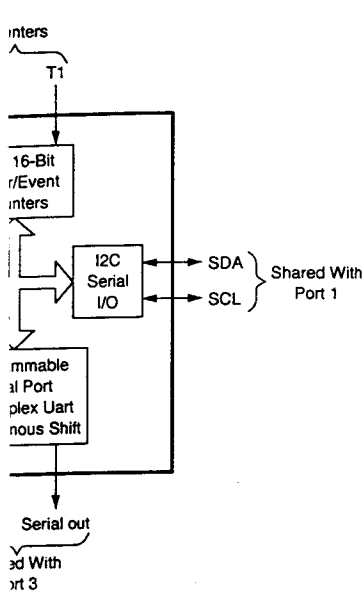


IC401 TDA8171



IC351 TDA7263





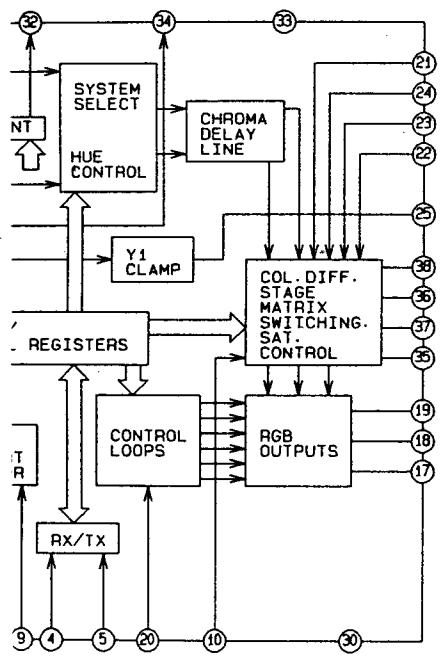
The VideoCrypt decoder department.

In the event of a fault o

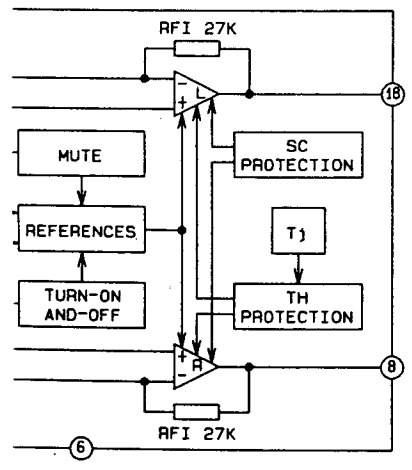
1. Contact the Mitsubishi advance replacemen
2. Upon receipt of the re and return it with the

Failure to return the PC PCB costs.

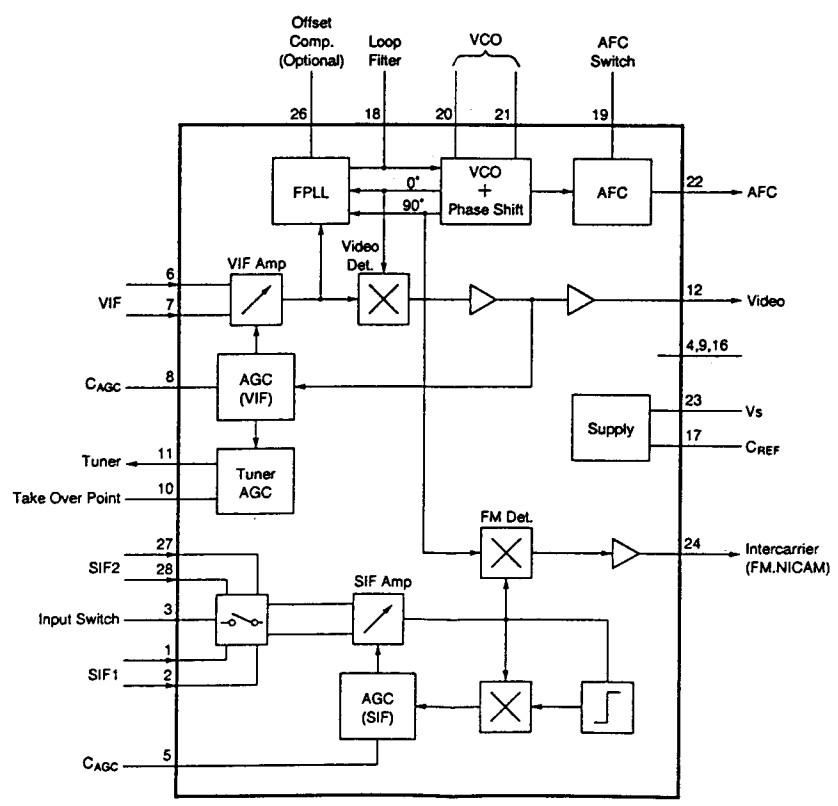
NOTE
The plastic PCB frame, be retained as the repla items.

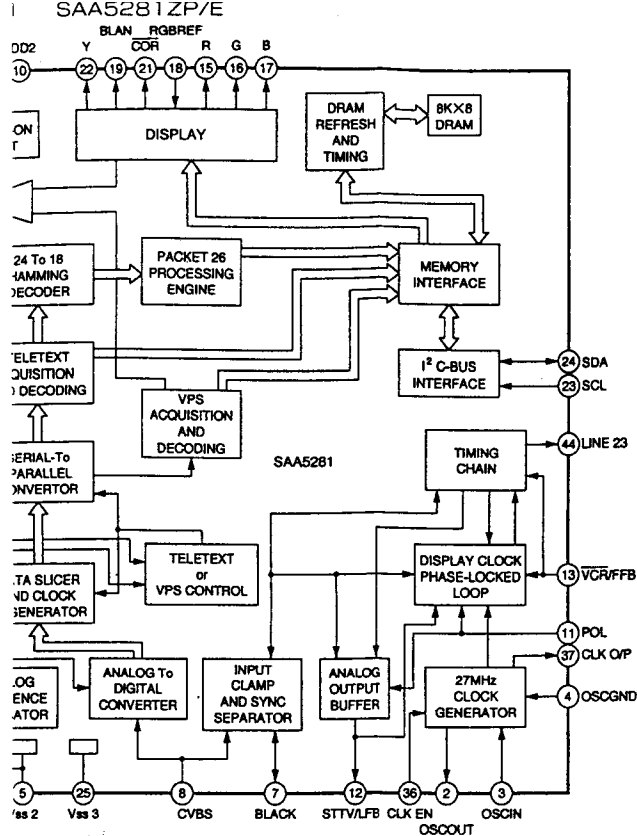


51 TDA7263



IC101 TDA4472-A





The VideoCrypt decoder PCB is only serviceable by Mitsubishi service department.

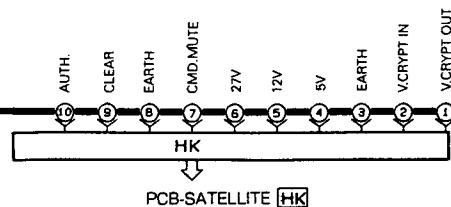
In the event of a fault on this PCB, please follow this procedure:

1. Contact the Mitsubishi consumer spares department to request an advance replacement VideoCrypt decoder PCB.
2. Upon receipt of the replacement PCB, complete the enclosed form and return it with the faulty PCB, in the packaging provided.

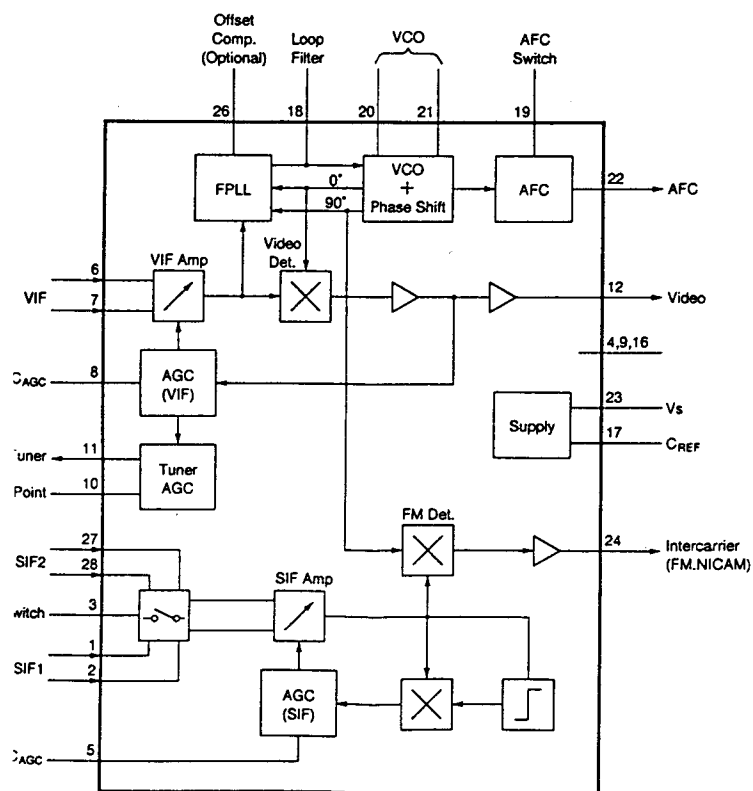
Failure to return the PCB within 30 days will incur full replacement PCB costs.

NOTE

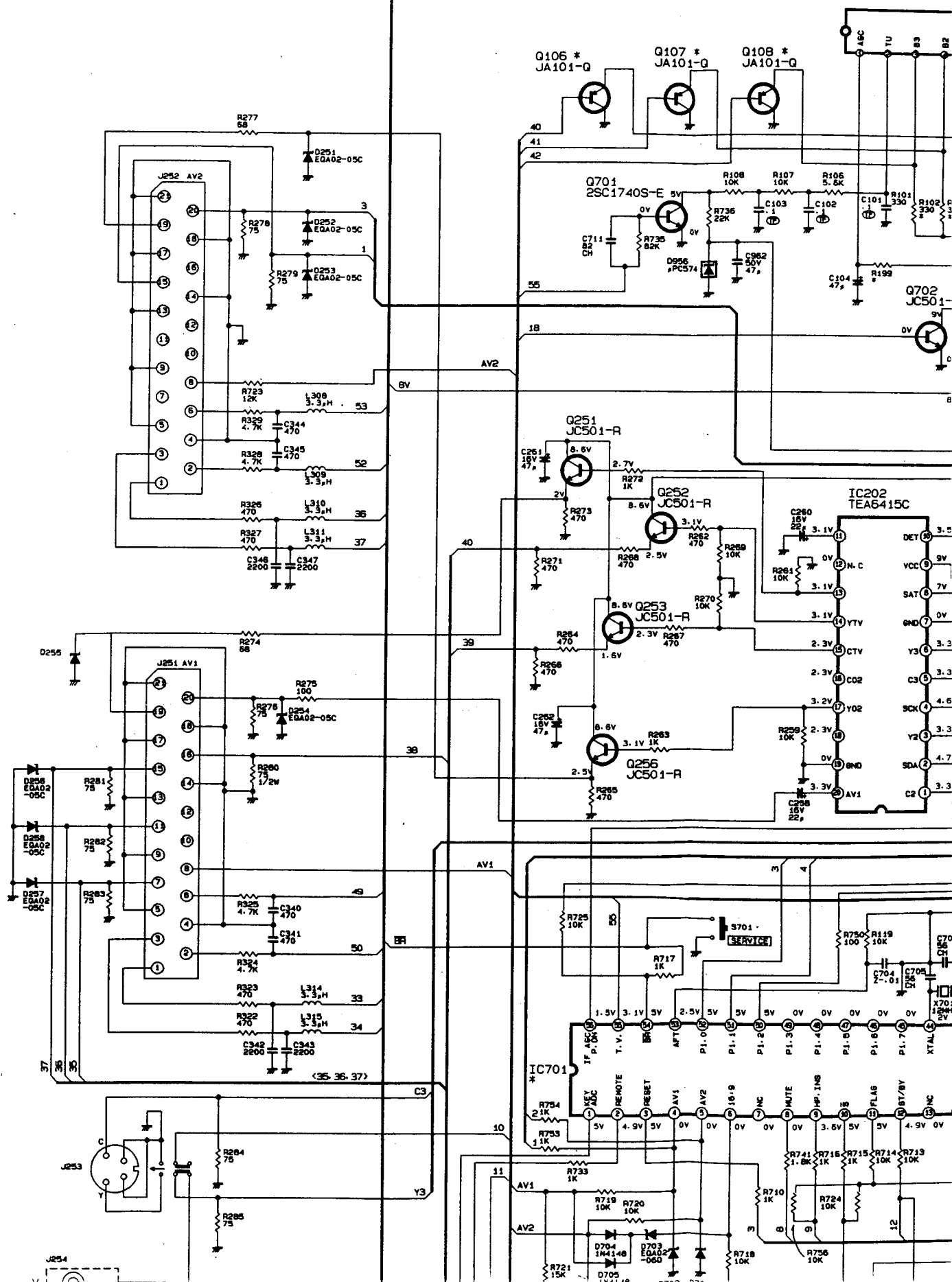
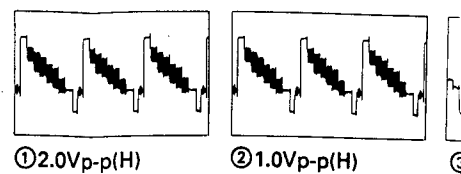
The plastic PCB frame, connecting lead and fixing screw should be retained as the replacement PCB is supplied *without* these items.

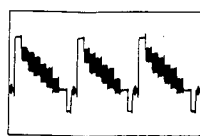


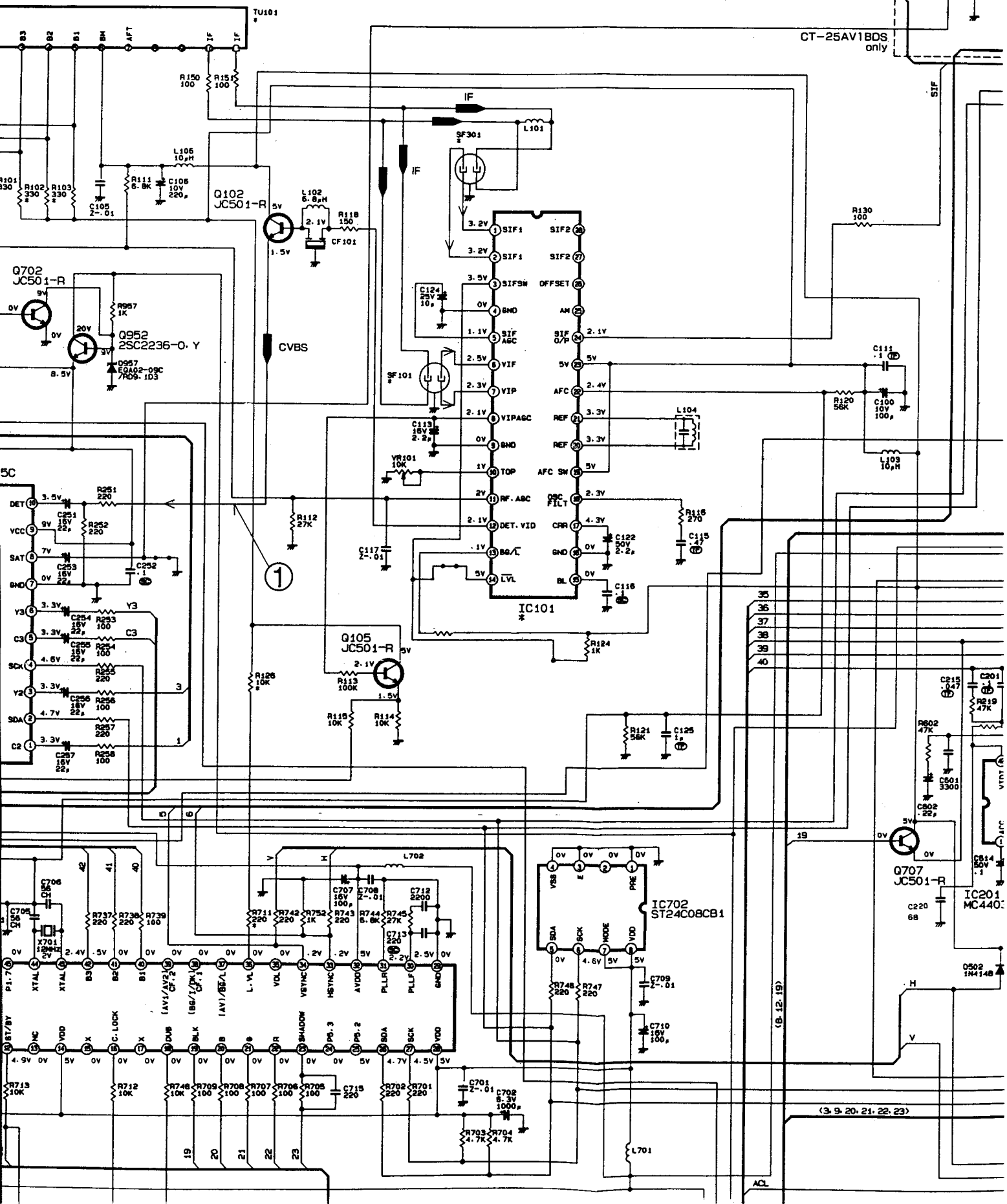
IC101 TDA4472-A

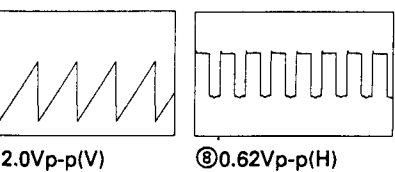


CT-25AV1BD
CT-25AV1LD
CT-25AV1BDS
CT-28AV1BD
CT-28AV1LD
CT-28AV1BDS



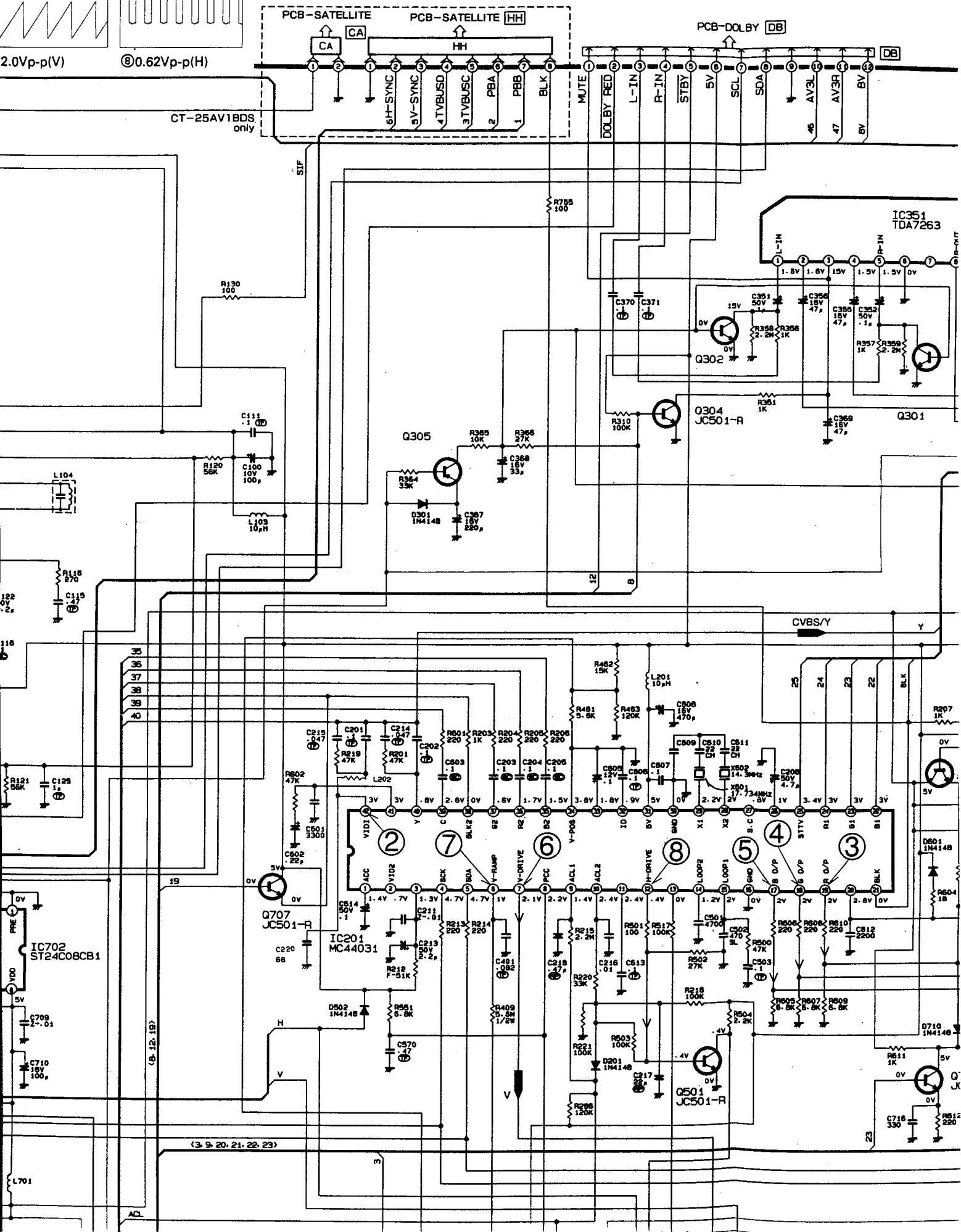






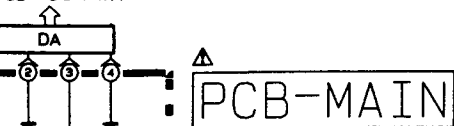
2.0Vp-p(V)

⑧ $0.62V_{p-p}(H)$



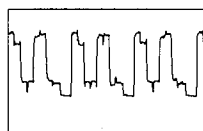
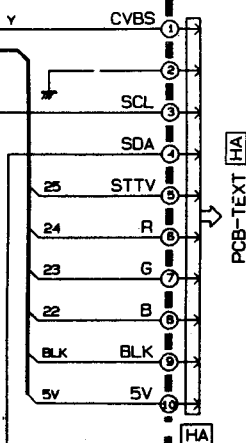
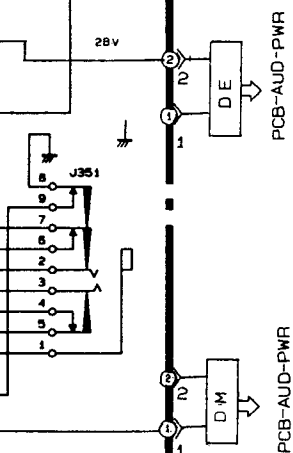
BD/LD/BDS

PCB-AUD-PWR

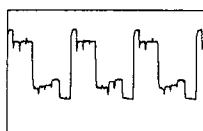


DIFFERENCE TABLE

	BDS	LD	BD
Q106		○	
Q107		○	
Q108		○	
R102		○	
R103		○	
SF101	J3950	K3953	J3950
TU101	U1343	UV1315	UV1343



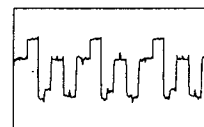
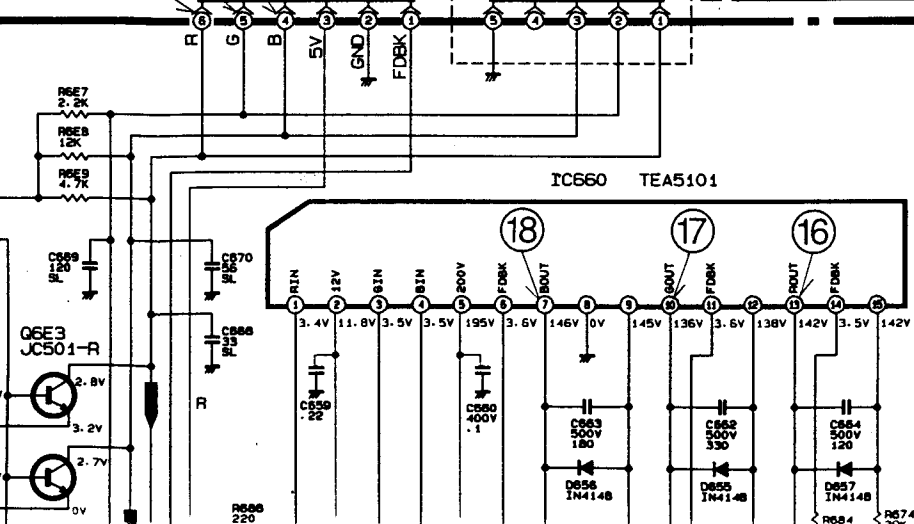
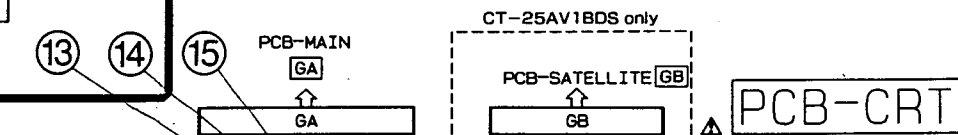
⑬0.86Vp-p(H)



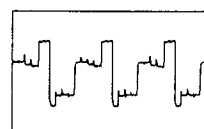
⑭0.92Vp-p(H)



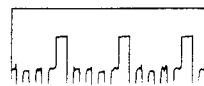
⑮1.3Vp-p(H)



⑯86Vp-p(H)



⑰87Vp-p(H)



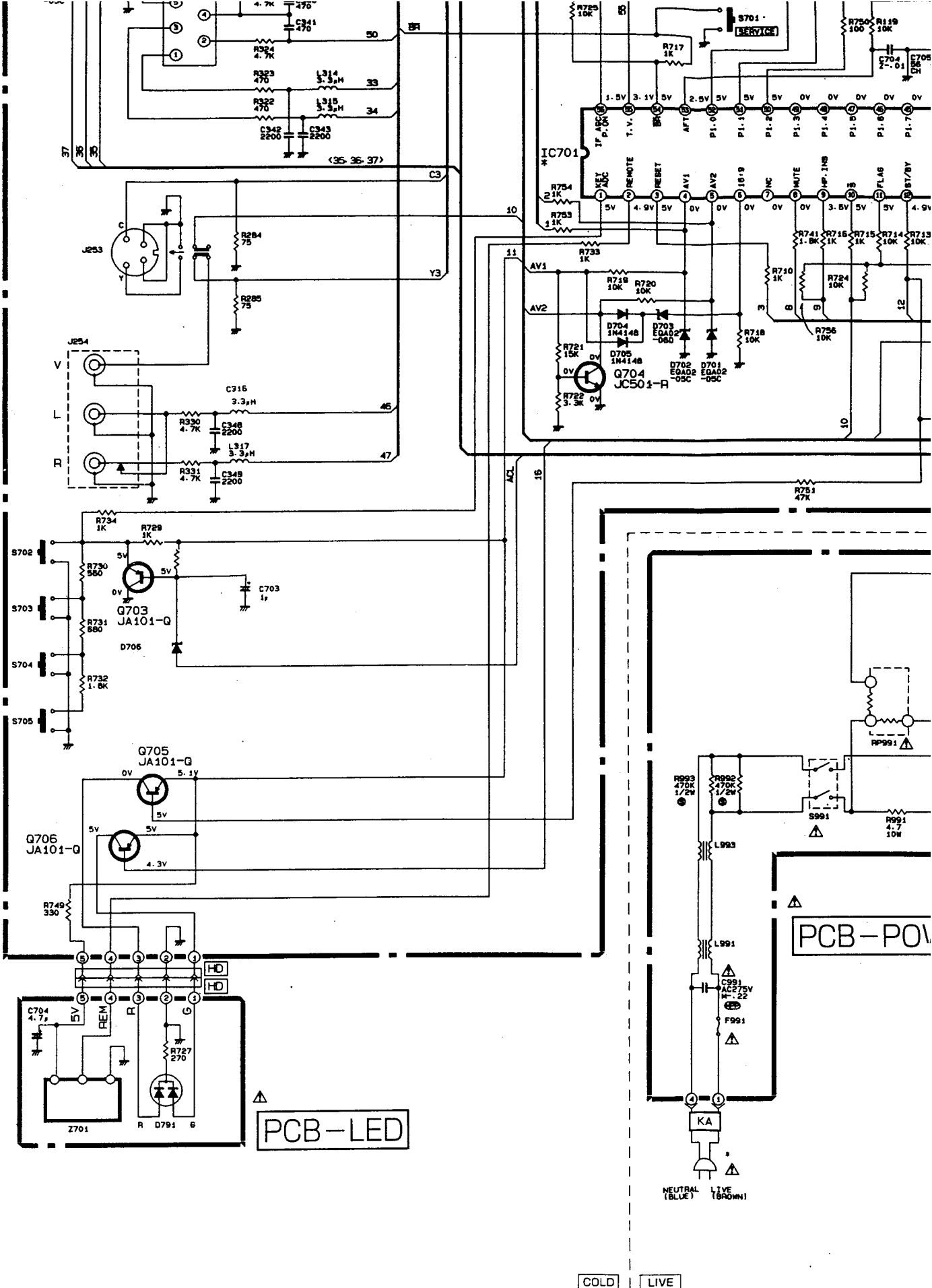
E

F

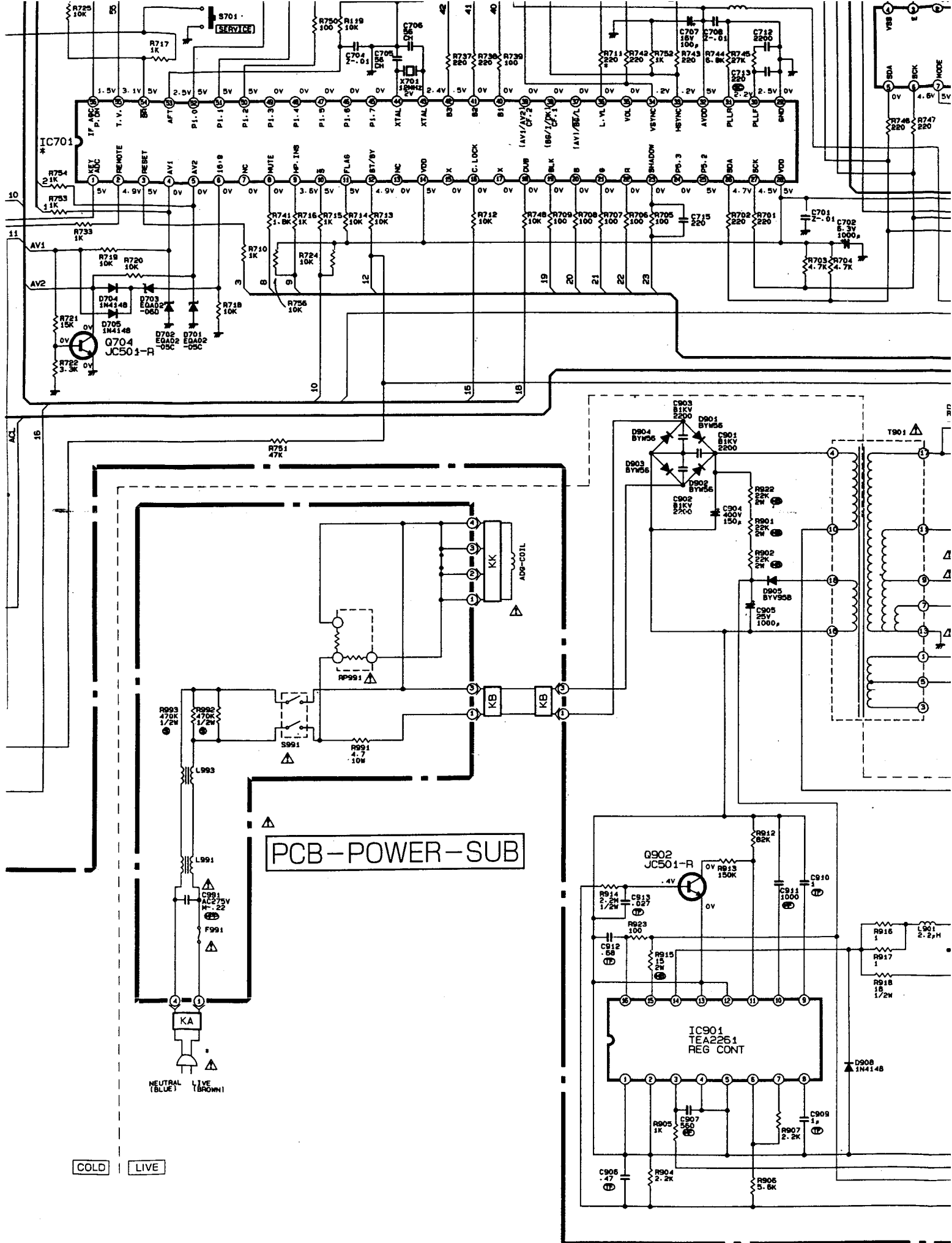
G

H

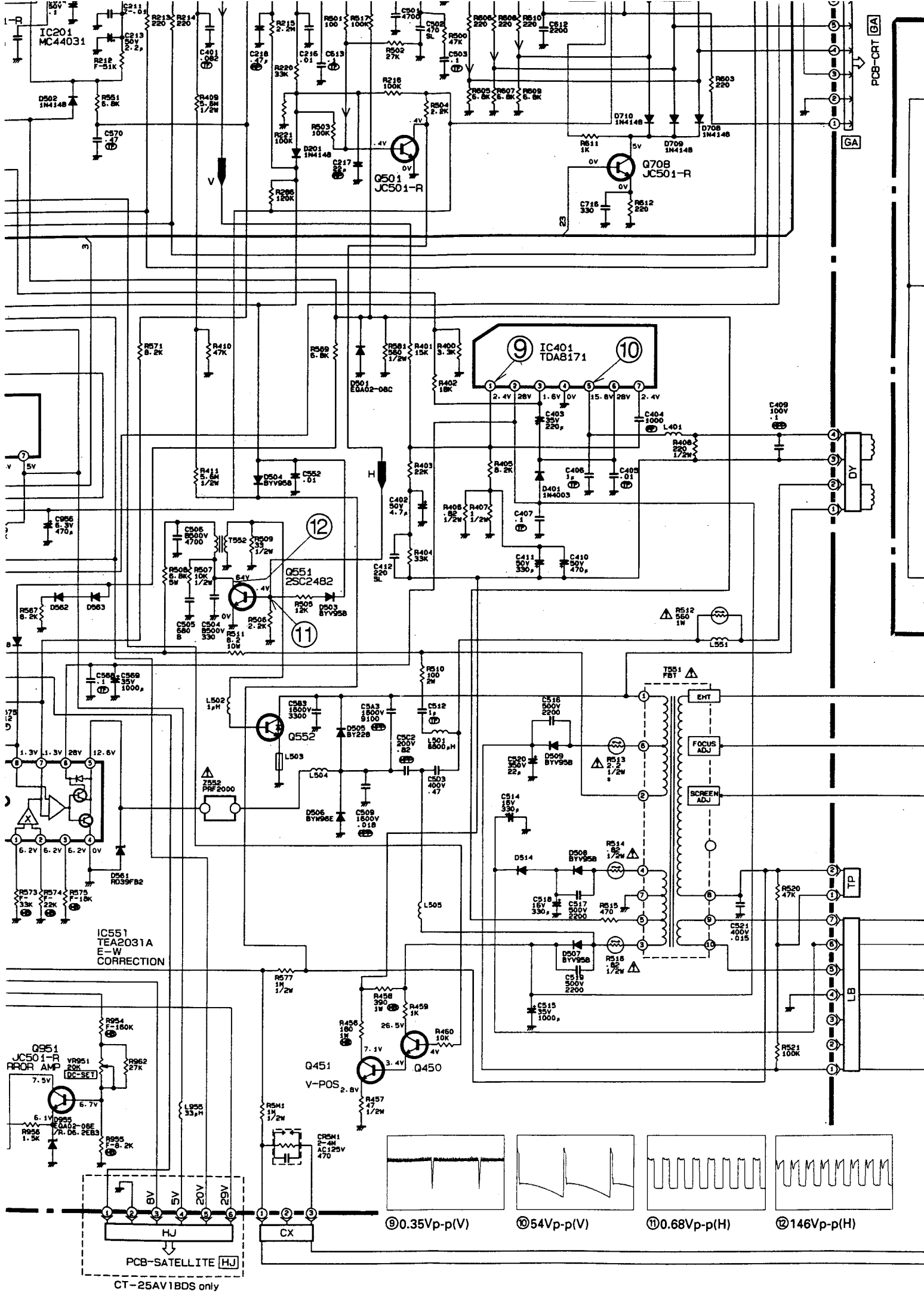
I

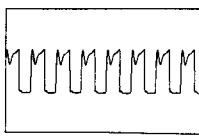
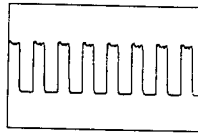
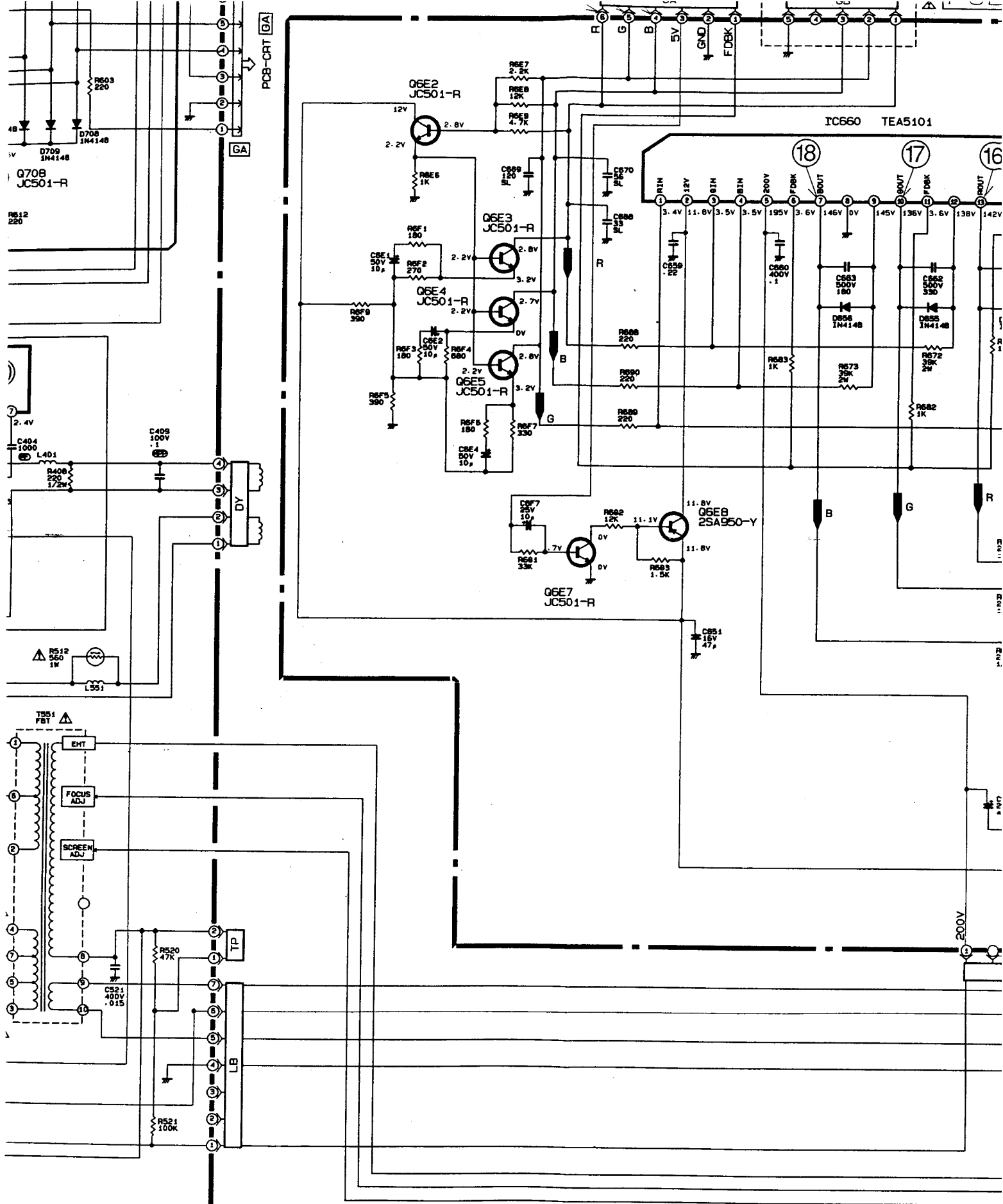


CT-25AV1BD
 CT-25AV1LD
 CT-25AV1BDS
 CT-28AV1BD
 CT-28AV1LD
 CT-28AV1BDS



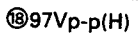
* See page ① for IC block diagrams.



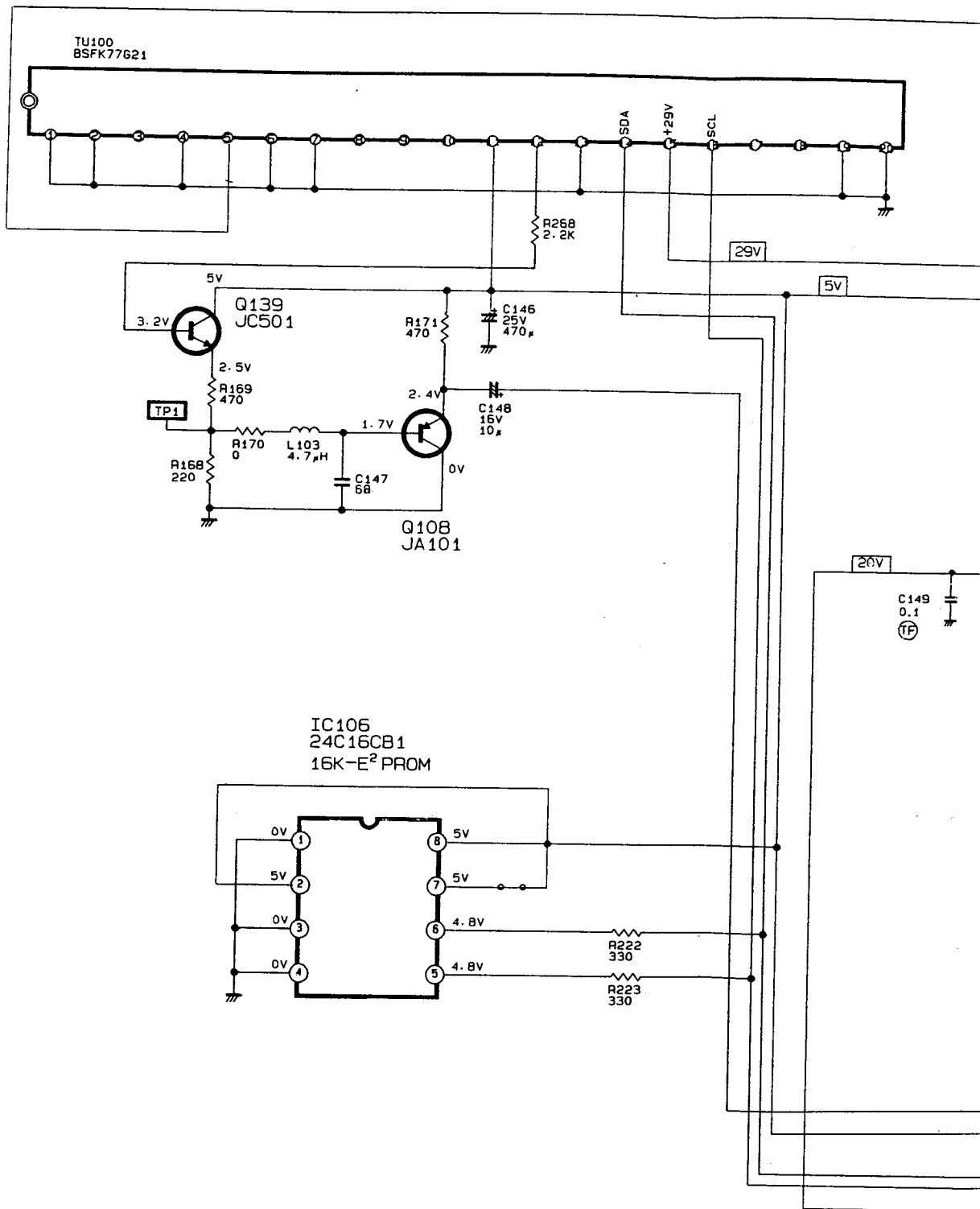


① 0.68Vp-p(H)

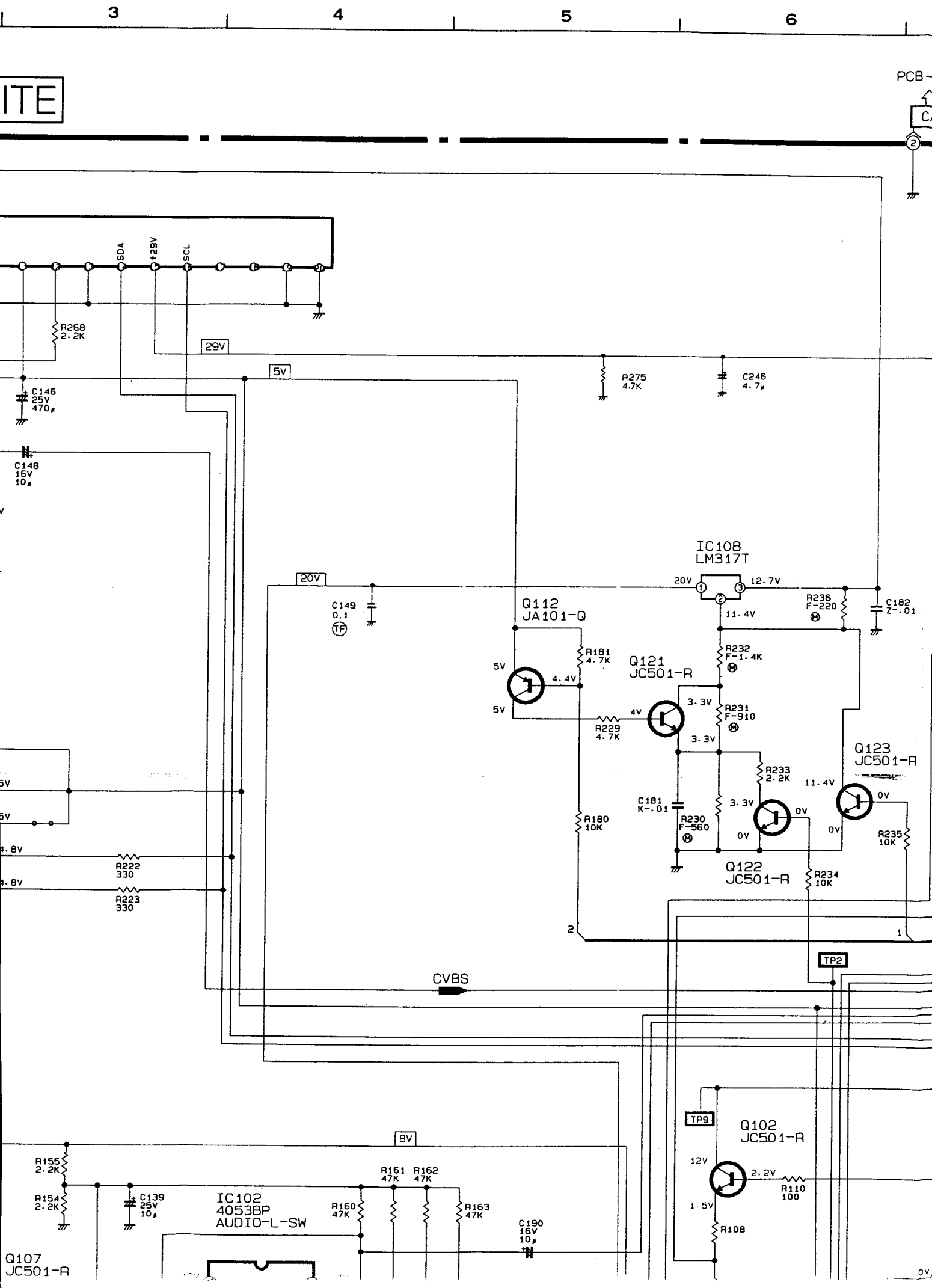
② 146Vp-p(H)

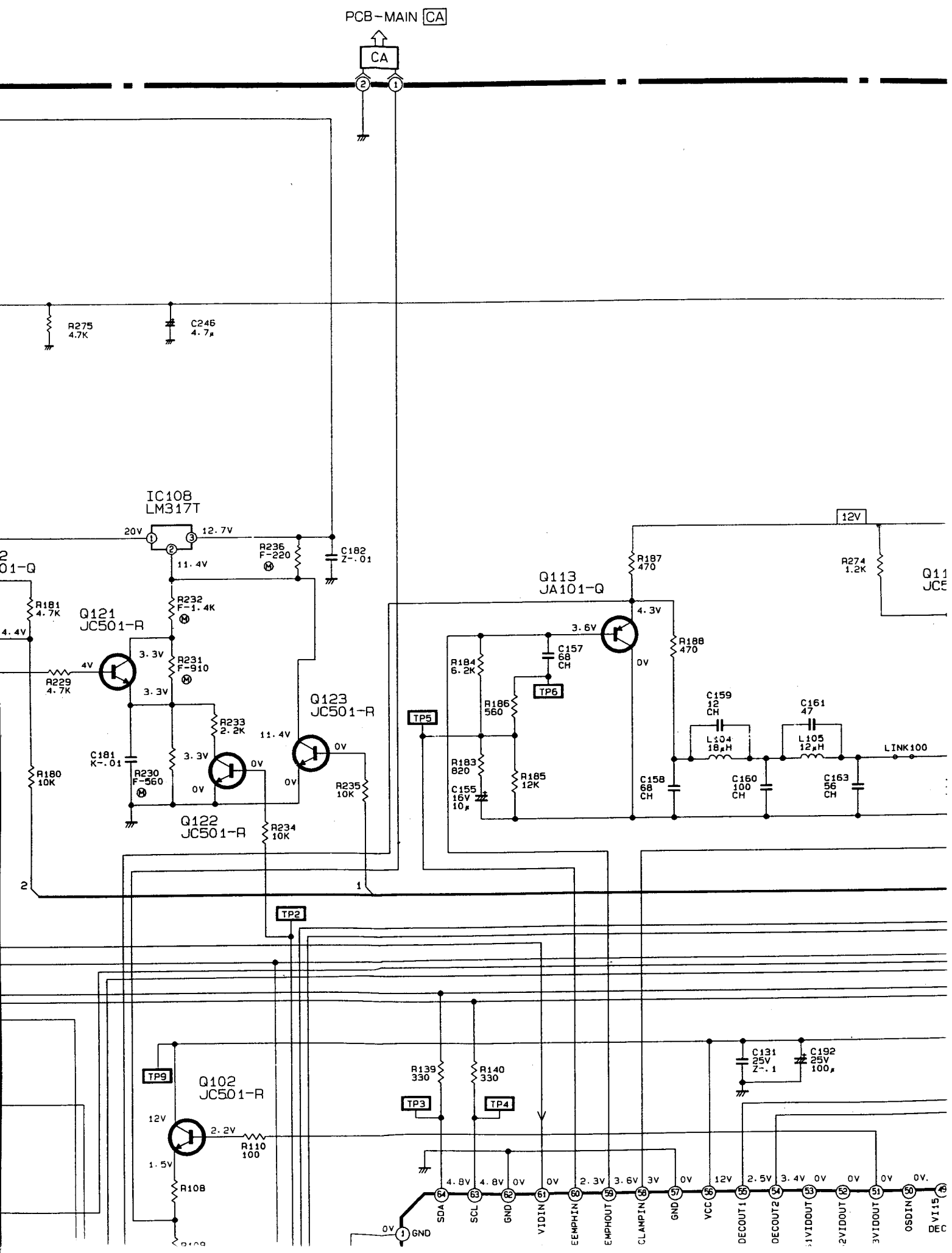


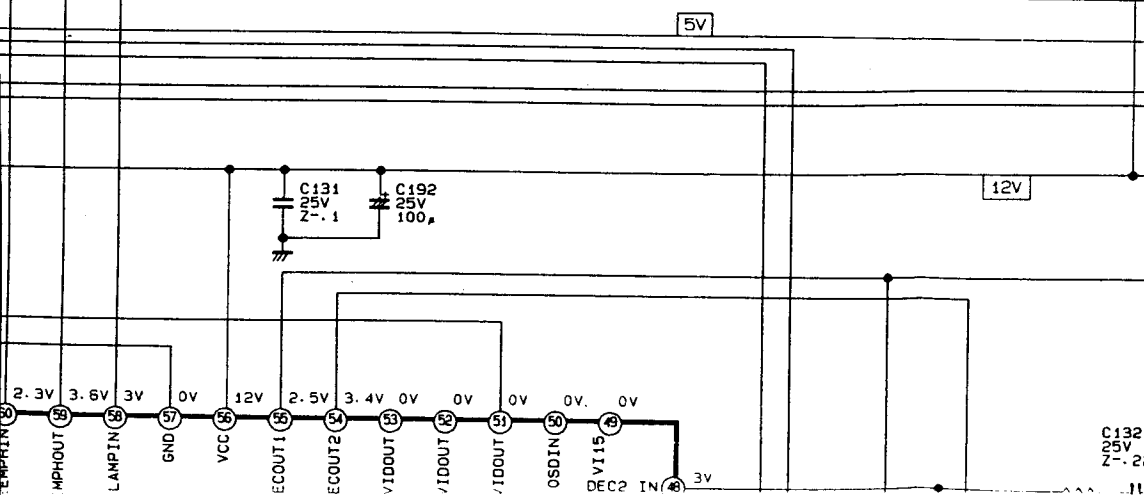
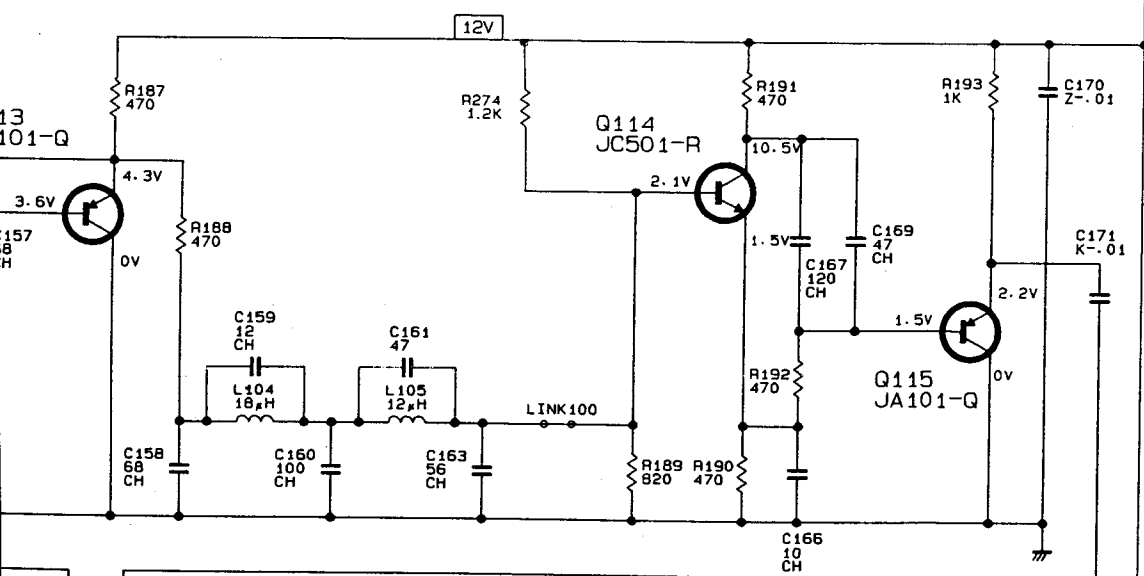
PCB-SATELLITE



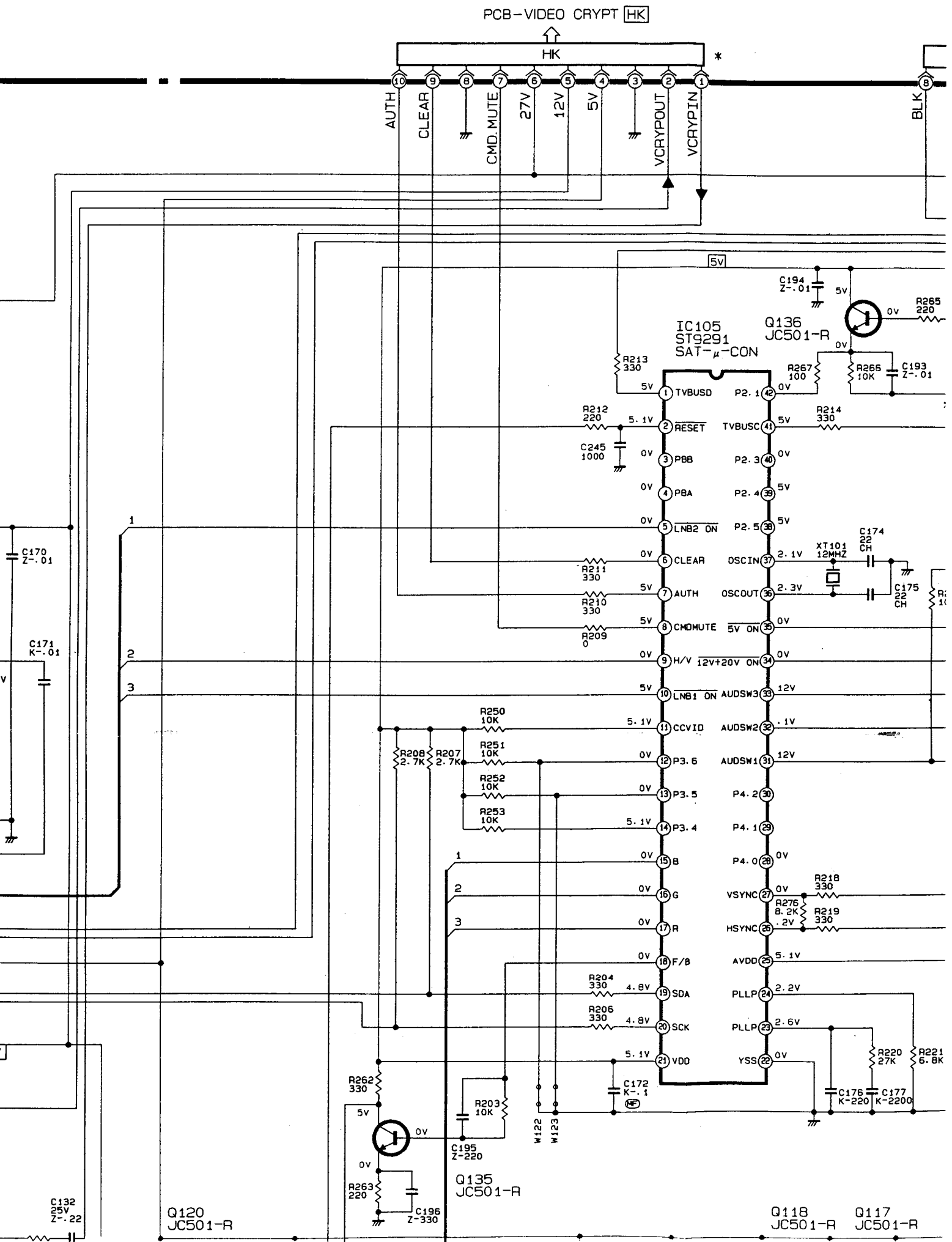
ITE

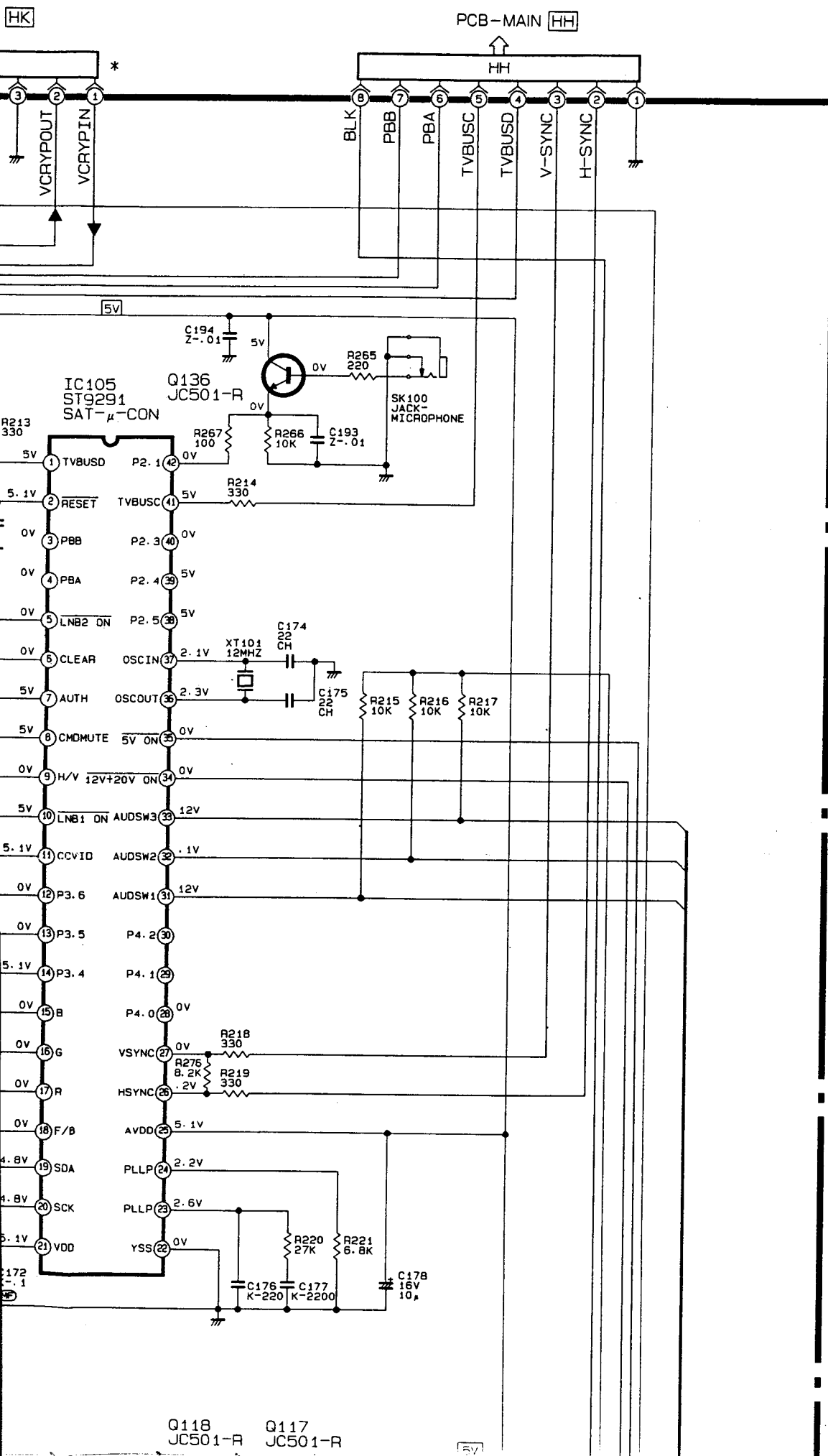






Q120
JC501-R





E

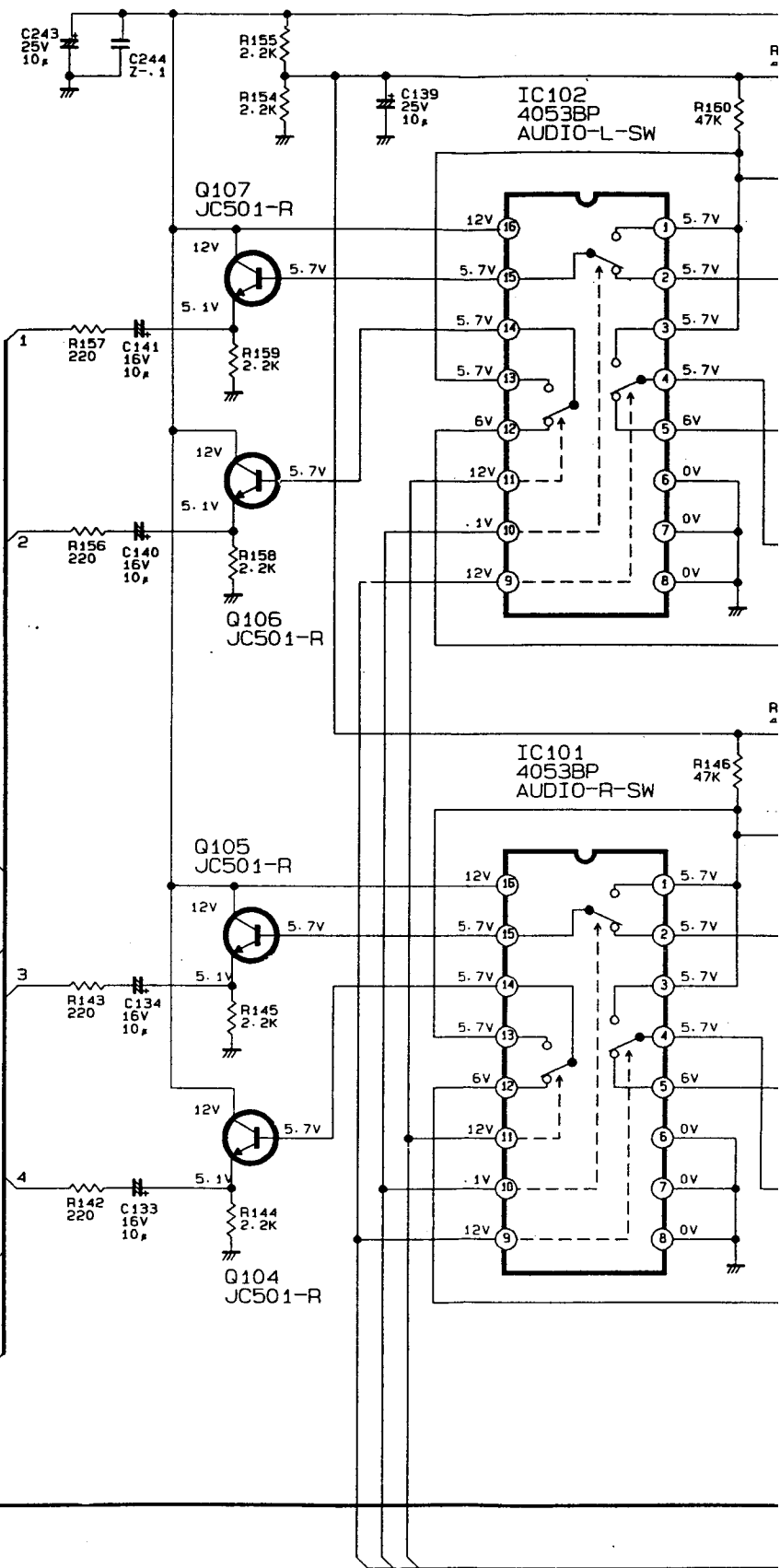
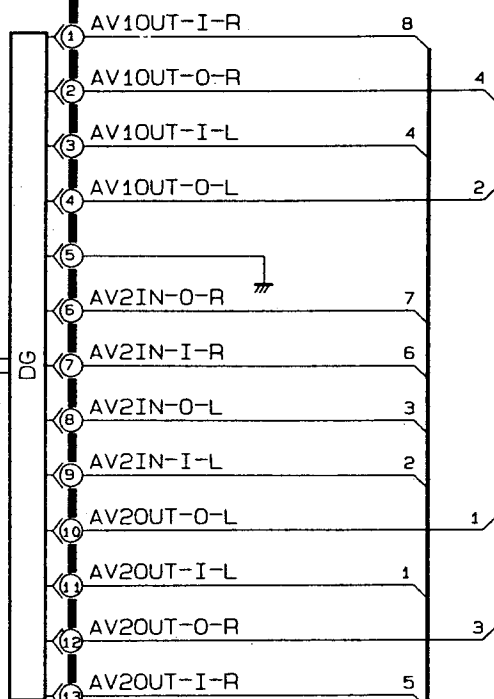
F

G

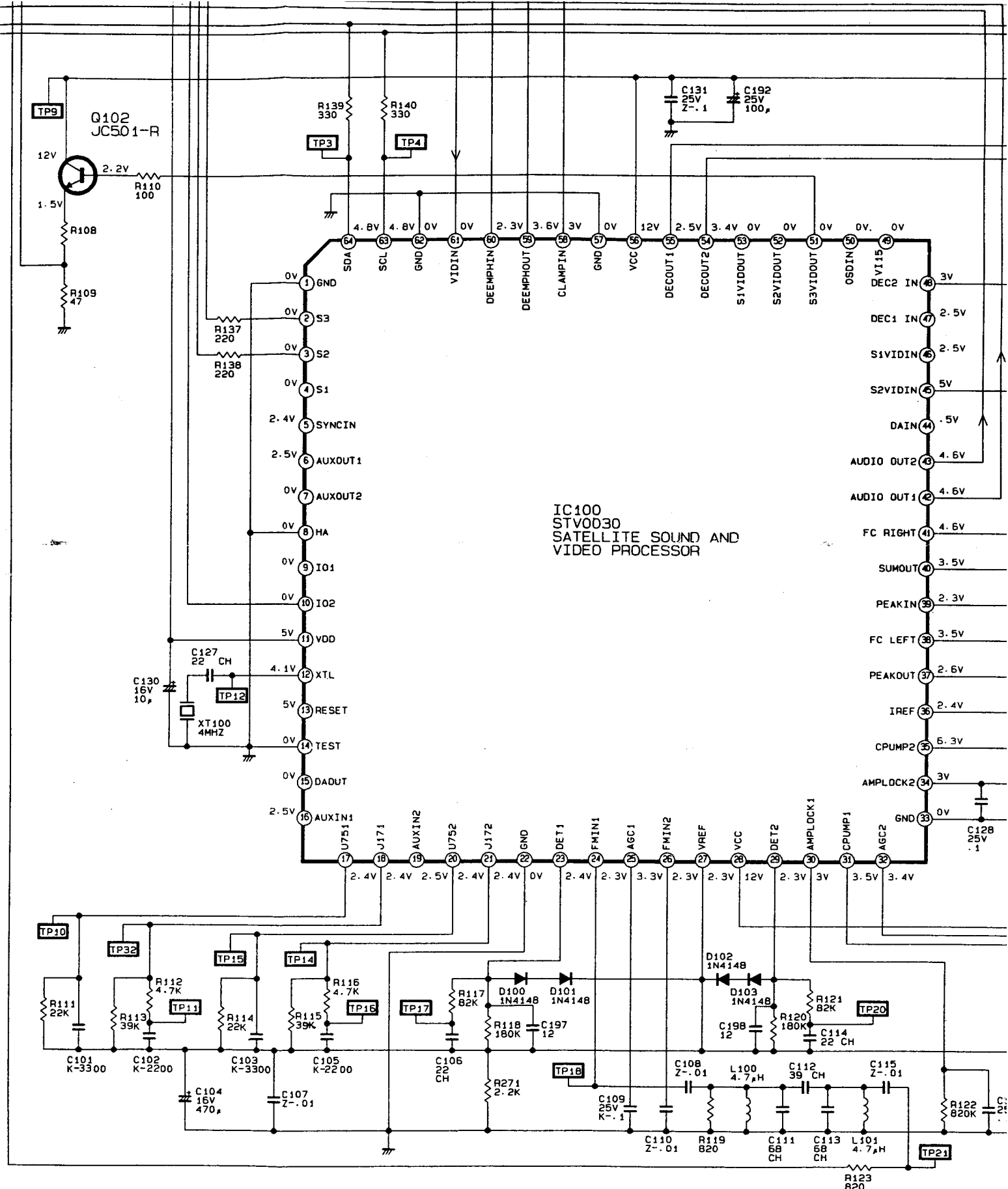
H

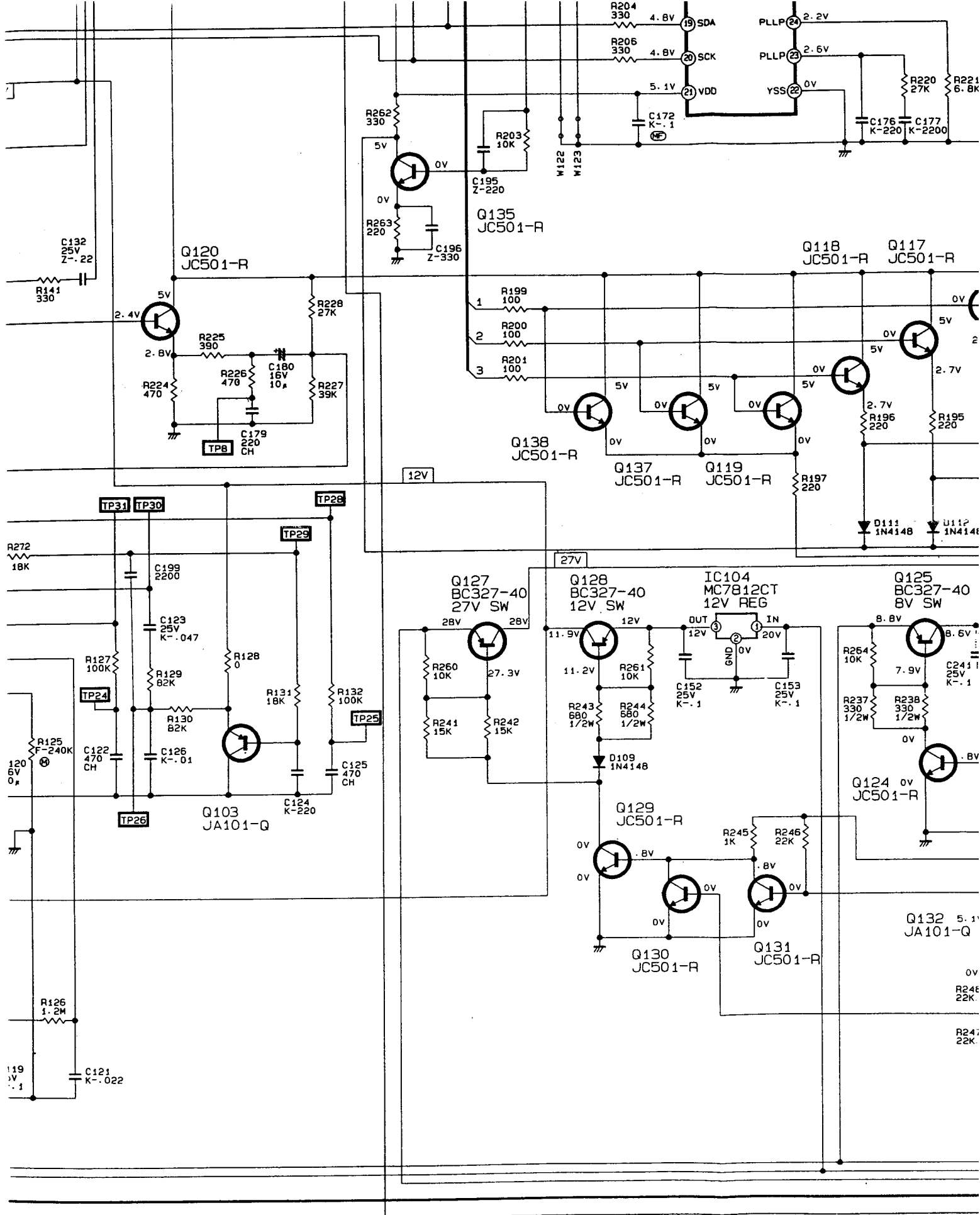
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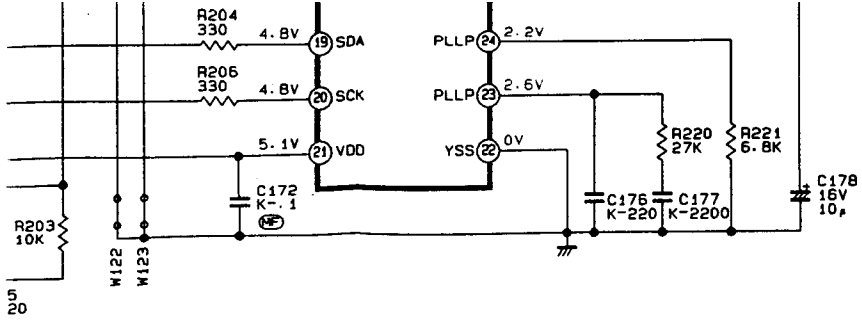
PCB-SOUND [DG]



CT-25AV1BD
 CT-25AV1LD
 CT-25AV1BDS
 CT-28AV1BD
 CT-28AV1LD
 CT-28AV1BDS







135
501-R

